SUBJECT and TITLE INDEX

POLYMER ENGINEERING AND SCIENCE
VOLUME 23
1983

A

1. ABS

Failure of Rubber-Modified Plastic Liners, Y. W. Mai, *July, p. 560*

Engineering and Molding Properties of Poly(Vinyl Chloride), Acrylonitrile-Butadiene-Styrene and Polyester Blends S. K. Khanna and W. I. Congdon, *Mid-August, p. 627*

Rebound Test to Measure the Strength of Polymeric Materials, T. Casiraghi, *November, p. 902*

2. Acetal

Effects of Strain Rate and Temperature upon Tensile Properties of Acetal Copolymers, K. F. Wissbrun, *March, p. 216*

3. Additives

Effect of a Diamine Additive on the Structure-Property Relationships of RIM Polyurethane Elastomers, J. Blackwell, J. Quay, and R. B. Turner, *October, p. 816*

4. Agglomeration

Rheological Behavior of Highly Filled Polymer Melts, D. M. Bigg, *March, p.206*

5. Aging

Thermal Aging Study of Carboxyl-Terminated Polybutadiene and Poly (Butadiene-Acrylonitrile)-Reactive Liquid Polymers, Y. Okamoto, *March, p.222*

Physical Aging in Polystyrene: Comparison of the Changes in Creep Behavior with the Enthalpy Relaxation, R-J. Roe and G. M. Millman, *April, p. 318*

Dynamic Mechanical Studies of Thermal Aging in Poly (Vinyl Chloride), E. Roche, *May, p. 390*

Zero Migration of Monomers in Glassy Polymers: A Possible Artifact of Thermal Depolymerization, J. L. Osborne, G. C. Sarti, W. J. Koros, and H. B. Hopfenberg, *June, p. 473*

6. Amorphous Polymers

Viscoelastic Behavior of Amorphous Polymers in the Glass-Rubber Transition Region: Birefringence Studies, B. E. Read, *October, p. 835*

7. Annealing

Annealing of Ultra-Oriented High Density Polyethylene Extrudates, A. Tsuruta, T. Kanamoto, K. Tanaka, and R. Porter, *June, p. 521*

Vibrational Spectroscopic Characterization of Rigid Rod Polymers: IV. Crystalline Modifications of Poly (p-phenylene terephthalamide), D. Y Shen, S. E. Molis, and S. L. Hsu, *July, p. 543*

Effect of a Diamine Additive on the Structure-Property Relationships of RIM Polyurethane Elastomers, J. Blackwell, J. Quay, and R. B. Turner, *October, p. 816*

8. Armoring

Vulcanization Shrinkage of Rubber Articles with Rigid Armoring Parts, L. I. Tukachinski, *April, p. 350*

9. Aspect Ratio

Factors Affecting the Mechanical Properties of Mica-Filled Polypropylenes, C. Busigin, G. M. Martinez, R. T. Woodhams, and R. Lahtinen, *Mid-October, p. 766*

Solution Processing and Properties of Molecular Composite Fibers and Films, G. E. Price, T. E. Helminiak, and W. W. Adams, W-F. Hwang, D. R. Wiff, and C. Verschoore, *Mid-October, p. 784*

10. Azides

Azide-Phenolic Resin UV Resist (MRL) for Microlithography, T. Iwayanagi, M. Hashimoto, S. Nonogaki, S. Koibuchi and D. Makino, *Mid-December, p. 935*

B

11. Benzobisoxazole Polymers

Effects of Protonation on the Conformational Characteristics and Geometry of the Rod-like Benzobisoxazole Polymers, W. J. Welsh and J. E. Mark, *February, p. 140*

Phase Relationships of Rigid Rod Polymer/Flexible Coil Polymer/Solvent Ternary Systems, W-F. Hwang, D. R. Wiff, and C. Verschoore, *Mid-October, p. 789*

Solution Processing and Properties of Molecular Composite Fibers and Films, W-F. Hwang, D. R. Wiff, C. Verschoore, G. E. Price, T. E. Helminiak, and W. W. Adams, *Mid-October, p. 784*

12. Biaxial Orientation

Structure-Properties Relationships in Biaxially Oriented Polypropylene Films, A. J. De Vries, *Mid-April, p. 241*

13. Birefringence

Structure-Properties Relationships in Biaxially Oriented Polypropylene Films, A. J. De Vries, *Mid-April, p. 241*

The Specification of Orientation and its Development in Polymer Processing, J. L. White and J. E. Spruiell, *Mid-April, P. 247*

Orientation Development in the Injection Molding of Amorphous Polymers, A. I. Isayev, *Mid-April, p. 271*

Viscoelastic Behavior of Amorphous Polymers in the Glass-Rubber Transition Region: Birefringence Studies, B. E. Read, *October, p. 835*

14. Bleaching

Contrast Enhanced Photoresists—Processing and Modeling, B. F. Griffing and P. R. West, *Mid-December, p. 947*

15. Blends

Aspects of Dispersion and Flow in Thermoplastic-Elastomer Blends, H. P. Schreiber and A. Olguin, *February, p. 129*

Modeling of Transport of Small Molecules in Polymer Blends: Application of Effective Medium Theory, J. Sax and J. M. Ottino, *February, p. 165*

Laminar Mixing of Polymeric Liquids; A Brief Review and Recent Theoretical Developments, J. M. Ottino and R. Chella, *May, p. 357*

Toughened Nylon Resins, S. Y. Hobbs, R. C. Bopp, and V. H. Watkins, *May, p. 380*

Effect of the Addition of EPM Copolymers on the Properties of High Density Polyethylene/Isotactic Polypropylene Blends: II. Morphology and Mechanical Properties of Extruded Samples, L. D'Orazio, R. Greco, E. Martuscelli, and G. Ragosta, *June, p. 489*

Characteristics of Polynorbornene and Ethylene-Propylene Terpolymer Blends, C. S. Wang, *June, p. 530*

Melt Flow of Polymer Blends, L. A. Utracki, *Mid-August, p. 602*

A Phenomenological Master Curve for Viscosity—Structure Data for Two Phase Polymer Systems in Simple Shear Flow, J. Lyngaae-Jorgensen, *Mid-August, p. 610*

The Stability of Blends of Incompatible Thermoplastics, B. Maxwell and G. L Jasso, *Mid-August, p. 614*

Melt Rheology of Polymer Blends the Morphology Feedback, A. P. Plochocki, *Mid-August, p. 618*

Engineering and Molding Properties of Poly (Vinyl Chloride), Acrylonitrile-Butadiene-Styrene and Polyester Blends, S. K. Khanna and W. I. Congdon, *Mid-August, p. 627*

Mechanical Properties of Injection Molded Blends of Poly (Ethylene-Terephthalate) and Poly (Amide-6,6), M. R. Kamal, M. A. Sahto, and L. A. Utracki, *Mid-August, p. 637*

Compounding Extruders for Improved Polyblends, K. Eise, J. Curry, and J. R. Nangeroni, *Mid-August, p. 642*

NMR Characterization of Intermolecular Interactions for Polymers, IV, Intermolecular Interactions of Low Molecular Weight Analogues for Compatible Blends of Polystyrene and Poly (2,6-Dimethyl-1,4-Phenylene Oxide), M. B. Djordjevic and R. S. Porter, *August, p. 650*

On the Application of Fourier Transform Infrared Spectroscopy to the Elucidation of Specific Interactions in Miscible Polyester-Poly (vinyl chloride) Blends, D. F. Varnell, E. J. Moskala, P. C. Painter, and M. M. Coleman, *August, p. 658*

A Comparison of Miscible Binary Blend Interaction Parameters Measured by Different Methods, J. E. Harris, D. R. Paul, and J. W. Barlow, *August, p. 676*

Fourier Transform Infrared Studies of Poly (Vinyl Chloride) Blends with Ethylene Co- and Terpolymers, M. Iskandar, C. Tran, L. M. Robeson, and J. E. McGrath, *August, p. 682*

Fluorescence Study of Polymer Chain Interpenetration and of the Rate of Phase Separation in Incompatible Polymer Blends, H. Morawetz, *August, p. 689*

Poly (Butyleneterephthalate)-Ethylene-vinylacetate Polymer Blends, F. Pilati, *September, p. 750*

Blending of Polystyrene With Styrene-Siloxane Block and Graft Copolymers, P. Bajaj, D. C. Gupta, and S. K. Varshney, *October, p. 820*

Deformation Studies of Polystyrene/-Poly (Vinyl Methyl Ether) Blends by Mechanical-Vibrational Spectroscopy, F. J. Lu, D. J. Burchell, N. Li, and S. L. Hsu, *November, p. 861*

Thermal, Mechanical, and Rheological Behavior of Blends of Ultrahigh and Normal-Molecular-Weight Linear Polyethylenes, S. K. Bhateja and E. H. Andrews, *November, p. 888*

16. Block Copolymers

Properties of Polyisobutylene- Polyurethane Block Copolymers: I. Macroglycols from Ozonolysis of Isobutylene-Isoprene Copolymer, T. A. Speckhard, G. Ver Strate, P. E. Gibson, and S. L. Cooper *April, p. 337*

Dynamic Mechanical and Thermomechanical Properties of Silicone-Polycarbonate Block Copolymers, W. Maung, K. M. Chua, T. H. NG, and H. L. Williams, *Mid-June, p. 439*

Characterization of Electron Beam Crosslinked Poly (styrene-block-ethylene-co-butylene-block-styrene), D. E. Zurawski and L. H. Sperling, *June, p. 510*

Melt Flow of Polymer Blends, L. A. Utracki, *Mid-Augsut, p. 602*

Poly (Buteyleneterephthalate)-Ethylene-vinylacetate Polymer Blends, F. Pilati, *September, p. 750*

Effect of a Diamine Additive on the Structure-Property Relationships of RIM Polyurethane Elastomers, J. Blackwell, J. Quay, and R. B. Turner, *October, p. 816*

Blending of Polystyrene With Styrene-Siloxane Block and Graft Copolymers, P. Bajaj, D. C. Gupta, and S. K. Varshney, *October, p. 820*

17. Blowing Agents

An Observation on the Han-Villamizar Critical Pressure Concept in Thermoplastic Foams, J. L. Throne, *April, p. 354*

18. Blow Molding

Heat Transfer and Microstructure in Extrusion Blowmolding, M. R. Kamal and D. Kalyon, *June, p. 503*

19. Boger Fluids

Highly Elastic-Constant Viscosity Fluids, L. Choplin, P. J. Carreau, and A. Aitkadi, *Mid-June, p. 459*

20. Bonding

Effects of Protonation on the Conformational Characteristics and Geometry of the Rod-like Benzobisoxazole Polymers, W. J. Welsh and J. E. Mark, *February, p. 140*

21. Bonding Mechanisms

Heating and Bonding Mechanisms in Ultrasonic Welding of Thermoplastics, M. N. Tolunay, P. R. Dawson, and K. K. Wang, *September, p. 726*

22. Bottle Blowing

Blowing of Oriented PET Bottles: Predictions of Free Blow Size and Shape, L. Erwin, M. A. Pollock, and H. Gonzalez, *October, p. 826*

C

23. Carbon Black

Effects of Axial Stretching on the Resistivity of Carbon Black Filled Silicone Rubber, J. Kost, M. Narkis, and A. Foux, *July, p. 567*

24. Carbon Fibers

Fracture Toughness of a Short-Fiber Reinforced Thermoplastic, W. E. Haskell, III-, S. P. Petrie, and R. W. Lewis, *Mid-October, p. 771*

25. Catalysis

Chemical Amplification in the Design of Dry Developing Resist Materials, H. Ito and C. G. Willson, *December, p. 1012*

26. Cell Size

Thermal Conductivity of Plastic Foams, R. J. J. Williams, and C. M. Aldao, *April, p. 293*

27. Chemiluminescence

Chemiluminescence Studies of the Degradation and Stabilization of Polymers, G. A. George, G. T. Egglestone, and S. Z. Riddell, *May, p. 412*

28. Chlorinated poly (vinyl chloride)

Dynamic Mechanical Studies of Thermal Aging in Poly (Vinyl Chloride), E. J. Roche, *May, p. 390*

29. Chloro Olefin Sulfones

X-Ray Photochemistry: ω-Chloro Olefin Sulfones, M. Kaplan, *Mid-December, p. 957*

30. Coatings

Equilibrium Solubility and Permeability of Sulfur Dioxide in Epoxy Resin of Aliphatic Diglycidyl Ether, G. R. Ranade, V. M. Nadgir, C. A. Plank, and W. L. S. Laukhuf, *January, p. 6*

31. Composites

Thermal and Rheological Properties of Blends of Polystyrene and Thermotropic Liquid Crystals, W. Huh, R. A. Weiss, and L. Nicolais, *Mid-October, p. 779*

32. Composition Dependence

Post-Curing of Dental Restorative Resin, W. Wu and B. M. Fanconi, *September, p. 704*

33. Condensation Reactions

Possibilities for Photoimaging Using Onium Salts, J. V. Crivello, *Mid-December, p. 953*

34. Continuous Stored Tank Reactor

Bulk Copolymerization of Styrene-Acrylic Esters: Some Analysis and Design Considerations, K. S. Balaraman, B. D. Kulkarni, and R. A. Mashelkar, *September, p. 719*

35. Contrast

Poly (4-Chlorostyrene): A New High Contrast Negative E-Beam Resist, J. Liutkus, M. Hatzakis, J. Shaw, and J. Paraszczak, *December, p. 1047*

Organosilicon Polymers for Lithographic Applications, J. M. Shaw, M. Hatzakis, J. Paraszczak, J. Liutkus, E. Babich, *December, p. 1054*

36. Contrast Enhancement

Contrast Enhanced Photoresists—Processing and Modeling, B. F. Griffing and P. R. West, *Mid-December, p. 947*

37. Copolyesters

Sandwich Injection Molding of Thermotropic Copolyesters and Filled Polyester, D. G. Baird and G. L. Wilkes, *Mid-August, p. 632*

38. Copolymer Composition

Copolymer Composition as a Function of Molecular Weight for Poly (Styrene-Methyl Methacrylate) Initiated by Ethylaluminum Sesquichloride, R. W. Nunes, S. J. Huang, J. F. Johnson, *January, p. 1*

Copolymerization

Relationship Between Polymerization Conditions and Rheological Properties for Styrene-Acrylonitrile Copolymers,

A. Garcia-Rejon, C. Rangel-Nafaile, L. Rios, and F. Cid, *Mid-June, p. 452*

Bulk Copolymerization of Styrene-Acrylic Esters: Some Analysis and Design Considerations, K. S. Balaraman, B. D. Kulkarni, and R. A. Mashelkar, *September, p. 719*

Poly (Butyleneterephthalate)-Ethylene-vinylacetate Polymer Blends, F. Pilati, *September, p. 750*

40. Copolymers

Evaluation of Poly (Allyl Methacrylate)-co-(Hydroxyethyl Methacrylate) as Negative Electron-Beam Resist, Z. C. H. Tan and S. S. Georgia, *Mid-December, p. 963*

Effect of Varying the Composition of Copolymers of Glycidyl Methacrylate and 3-Chlorostyrene (GMC) on Electron Lithographic Performance, A. E. Novembre and M. J. Bowden, *Mid-December, p. 975*

Poly (methyl α-Trifluoromethylacrylate) as a Positive Electron Beam Resist, C. G. Willson, H. Ito, D. C. Miller, and T. G. Tessier, *December, p. 1000*

41. Corrugation Depth

Parameter Design Model for Corrugated Tubing, H. L. Krein, *Mid-April, p. 285*

42. Cracking

Influence of External Environments on Fatigue Crack Growth in Epoxy Resin, K. Mizutani and T. Iwatsu, *March, p. 183*

Plane Strain Fracture Toughness of Polyethylene Pipe Materials, J. F. Mandell, D. R. Roberts, and F. J. McGarry, *May, p. 404*

Fracture Toughness of a Short-Fiber Reinforced Thermoplastic, W. E. Haskell, III, S. P. Petrie, and R. W. Lewis, *Mid-October, p. 771*

43. Crazing

Tensile Yield in Poly (4-Methyl Pentene-1), B. Hartman and R. F. Cole, Jr., *January, p. 13*

Solvent-Crazing Criteria, D. C. Wright and K. V. Gotham, *February, p. 135*

Residual Stress Craze and Crack Formation in Poly (Methyl Methacrylate), L. Bevan and H. Nugent, *March, p. 211*

Influence of Mineral Oils on Polystyrene Fracture, E. Paredes, A. Bustamante, and L. Rivas, *June, p. 498*

Stress-Relaxation Crazing of Polymers—An Energy Criterion, O. S. Brueller, *October, p. 844*

44. Creep

Prediction of Strain Recovery During Solid-Phase Forming of Thermoplastics, R. K. Okine and N. P. Suh, *Mid-February, p. 61*

Solvent-Crazing Criteria, D. C. Wright and K. V. Gotham, *February, p. 135*

Physical Aging in Polystyrene: Comparison of the Changes in Creep Behavior with the Enthalpy Relaxation, R-J. Roe and G. M. Millman, *April, p. 318*

45. Critical Pressure

An Observation on the Han-Villamizar Critical Pressure Concept in Thermoplastic Foams, J. L. Throne, *April, p. 354*

46. Critical Solution Temperature

Low-Energy Solvent Separation Method, T. G. Gutowski, N. P. Suh, C. Cangialose, and G. M. Berube, *March, p. 230*

47. Crosslinking

Characterizing Photoresists by Thermal Analysis, B. K. Appelt, *February, p. 125*

Polyurethane-Poly (Methyl Methacrylate) Interpenetrating Polymer Networks: Some Mechanical Properties, A. Morin, H. Djomo, and G. C. Meyer, *May, p. 394*

Characterization of Electron Beam Crosslinked Poly (styrene-block-ethylene-co-butylene-block-styrene), D. E. Zurawski and L. H. Sperling, *June, p. 510*

Poly(Butyleneterephthalate)-Ethylenevinylacetate Polymer Blends, F. Pilati, *September, p. 750*

A Dry-Etch Resistant Positive-Working Electron Resist, E. D. Roberts, *Mid-December, p. 968*

Electron Beam Lithography of Copolymeric Resists Containing Styrenes and Allyl Acrylates, J. Shu, W. Lee, L. Venable and G. Varnell, *Mid-December, p. 980*

Plasma Developable Photoresist Containing Electronic Excitation Energy Quenching System, M. Tsuda, S. Oikawa, A. Yokota, M. Yabuta, W. Kanai, K. Kashiwagi, I. Hijikata and H. Nakane, *December, p. 993*

Poly (4-Chlorostyrene), A New High Contrast Negative E-Beam Resist, J. Liutkus, M. Hatzakis, J. Shaw and J Paraszczak, *December, p. 1047*

48. Crystallinity

Tensile Yield in Poly (4-Methyl Penetene-1), B. Hartman and R. F. Cole, Jr., *January, p. 13*

Effects of Shearing Conditions on Crystalline Orientation and Relaxation in Polyethylene, E. S. Hsiue, R. E. Robertson, and G. S. Y. Yeh, *Mid-February, p. 74*

Notch Sensitivity and Fractography of Polyolefins, R. D. Goolsby and A. M. Chatterjee, *February, p. 117*

Structure-Properties Relationships in Biaxially Oriented Polypropylene Films, A. J. De Vries, *Mid-April, p. 241*

The Specification of Orientation and its Development in Polymer Processing, J. L. White and J. E. Spruiell, *Mid-April, p. 247*

New Techniques for the Characterization of Orientation in Semicrystalline Polymer Moldings, R. J. Samuels, *Mid-April, p. 257*

Physical Properties of High-Pressure Ethylene Vinylacetate Copolymers and Their Saponified Derivatives, R. J. Koopmans, R. Van Der Linden, and E. F. Vansant, *April, p. 306*

Studies on Whitening Phenomena Induced by Some Non-Solvents on Highly Oriented Glassy Polymers, N. H. Sung, R. E. Gahan, and R. E. Haven, *April, p. 328*

Properties of Polyisobutylene-Polyurethane Block Copolymers: I. Macroglycols from Ozonolysis of Isobutylene-Isoprene Copolymer, T. A. Speckhard, G. Ver Strate, P. E. Gibson, and S. L. Cooper, *April, p. 337*

Plane Strain Fracture Toughness of Polyethylene Pipe Materials, J. F. Mandell, D. R. Roberts, and F. J. McGarry, *May, p. 404*

Heat Transfer and Microstructure in Extrusion Blowmolding, M. R. Kamal and D. Kalyon, *June, p. 503*

Vibrational Spectroscopic Characterization of Rigid Rod Polymers: IV. Crystalline Modifications of Poly (p-phenylene terephthalamide), D. Y. Shen, S. E. Molis, and S. L. Hsu, *July, p. 543*

Head to Head Polymers, XXV: Properties of Head to Head Polyisobutylene, M. Malanga and O. Vogl, *July, p. 597*

High Modulus/High Strength Polyethylene Obtained by High-Pressure Injection Molding, J. Kubat and J.-A. Manson, *November, p. 869*

Effect of Morphology on Stress Relaxation of Polypropylene, G. Attalla, I. B. Guanella, and R. E. Cohen, *November, p. 883*

49. Crystallization

Isothermal and Nonisothermal Crystallization of Polyethylene, M. R. Kamal and E. Chu, *January, p. 27*

A Study of Structural Development in the High Speed Spinning of Poly (Ethylene Terephthalate), H. H. George, A. Holt, and A. Buckley, *Mid-February, p. 95*

The Rate of Crystallization of Poly (Ethylene Terephthalate) by Differential Scanning Calorimetry, C. C. Lin, *February, p. 113*

50. Cure

A Model of Compression Mold Filling, C. L. Tucker, III, and F. Folgar, *Mid-February, p. 69*

Predicting Conversion using Temperature as the Measured Variable for the RIM Process. Part I: Simulation and Measurement Structure, J. A. Romagnoli and J. Castro, *Mid-February, p. 105*

Characteristics of Polynorbornene and Ethylene-Propylene Terpolymer Blends, C. S. Wang, *June, p. 530*

Moldability Studies in Reactive Polymer Processing, L. T. Manzione and J. S. Osinski, *July, p. 576*

Determination of Time Independent Component of the Complex Modulus During Cure of Thermosetting Systems, R. J. Farris and C. Lee, *July, p. 586*

Post-Curing of Dental Restorative Resin, W. Wu and B. M. Fanconi, *September, p. 704*

Characterization of Fast-Cure Resins for Reaction Injection Molding, J. S. Osinski, *September, p. 756*

Predicting Conversion in the Reaction Injection Molding Process. Using Temperature as the Measured Variable Part II: Implementation of the On-Line Corrective Algorithm, O. Del Pino, J. A. Romagnoli, and J. M. Castro, *November, p. 895*

Electron Beam Lithography of Copolymeric Resists Containing Styrenes and Allyl Acrylates, J. Shu, W. Lee, L. Venable and G. Varnell, *Mid-December, p. 980*

D

51. *Deborah Number*

The Rheology and Spin Coating of Polyimide Solutions, S. A. Jenekhe, *October, p. 830*

52. *Degradation*

Head-to-Head Polymers 27: Thermal Degradation of Head-to-Head Polyisobutylene, M. Malanga, F. XI, and O. Vogl, *March, p. 226*

Chemiluminescence Studies of the Degradation and Stabilization of Polymers, G. A. George, G. T. Egglestone, and S. Z. Riddell, *May, p. 412*

Extrusion and Melt Spinning Characteristics of Thermally Degraded Polypropylene, H. Yamane and J. L. White, *June, p. 516*

Head to Head Polymers. XXV: Properties of Head to Head Polyisobutylene, M. Malanga and O. Vogl, *July, p. 597*

Dynamics of Ion Beam Modification of Polymer Films, T. Venkatesan, W. L. Brown, C. A. Murray, K. J. Marcantonio and B. J. Wilkens, *Mid-December, p. 931*

A Dry-Etch Resistant Positive-Working Electron Resist, E. D. Roberts, *Mid-December, p. 968*

53. *Density*

Some Mechanical Properties of Rigid Polyurethane Structural Foam, J. M. Lifshitz, *February, p. 144*

Physical Properties of High-Pressure Ethylene Vinylacetate Copolymers and Their Saponified Derivatives, R. J. Koopmans, R. Van Der Linden, *April, p. 306*

Physical Aging in Polystyrene: Comparison of the Changes in Creep Behavior with the Enthalpy Relaxation, R-J. Roe and G. M. Millman, *April, p. 318*

54. *Depolymerization*

Zero Migration of Monomers in Glassy Polymers: A Possible Artifact of Thermal Depolymerization, J. L. Osborne, G. C. Sarti, W. J. Koros, and H. B. Hopfenberg, *June, p. 473*

Dynamics of Ion Beam Modification of Polymer Films, T. Venkatesan, W. L. Brown, C. A. Murray, K. J. Marcantonio and B. J. Wilkens, *Mid-December, p. 931*

Possibilities for Photoimaging Using Onium Salts, J. V. Crivello, *Mid-December, p. 953*

Chemical Amplification in the Design of Dry Developing Resist Materials, H. Ito and C. G. Willson, *December, p. 1012*

55. *Devolatilization*

The Length of a Transfer Unit (LTU) for Polymer Devolatilization Processes in Screw Extruders, G. P. Collins, C. D. Denson, and G. Astarita, *April, p. 323*

56. *Diffraction*

Proximity Printing of Chrome Masks, D. Meyerhofer and J. Mitchell, *December, p. 990*

57. *Diffusion*

Modeling of Transport of Small Molecules in Polymer Blends: Application of Effective Medium Theory, J. Sax and J. M. Ottino, *February, p. 165*

Laminar Mixing of Polymeric Liquids; A Brief Review and Recent Theoretical Developments, J. M. Ottino and R. Chella, *May, p. 357*

Zero Migration of Monomers in Glassy Polymers: A Possible Artifact of Thermal Depolymerization, J. L Osborne, G. C. Sarti, W. J. Koros, and H. B. Hopfenberg, *June, p. 473*

Distribution of Striation Thickness from Impingement Mixers in Reaction Injection Molding, J. Baldyga and J. R. Bourne, *July, p. 556*

58. *Diffusivity*

The Dual-Mode Solution and Transport of Water in Poly(acrylonitrile), G. R. Mauze and S. A. Stern, *July, p. 548*

Diffusion of Ethyl Acetate Vapor in Strained Low Density Polyethylene, J. C. Phillips and A. Peterlin, *September, p. 734*

59. *Dissipated Energy*

Stress-Relaxation Crazing of Polymers—An Energy Criterion, O. S. Brueller, *October, p. 844*

60. *Draw Ratio*

Orientation Development in Thermotropic Liquid Crystal Polymers, Y. Ide and Z. Ophir, *Mid-April, p. 261*

Review on Processing Ultra High Tenacity Fibers From Flexible Polymer, T. Ohta, *September, p. 697*

Elastic Moduli of Highly Oriented Polyoxymethylene, C. L Choy, W. P. Leung, and C. W. Huang, *November, p. 910*

61. *Dry Etching*

A Dry-Etch Resistant Positive-Working Electron Resist, E. D. Roberts, *Mid-December, p. 968*

62. *Ductile-Brittle Transition*

The Effect of Storage Temperature on the Mobile Water Content and the Fracture Toughness of a Filled-Polymeric System, R. W. Cahill, *March, p. 197*

Toughened Nylon Resins, S. Y. Hobbs, R. C. Bopp, and V. H. Watkins, *May, p. 380*

63. *Dynamic Infrared Spectroscopy*

Deformation Studies of Polystyrene/-Poly(Vinyl Methyl Ether) Blends by Mechanical-Vibration Spectroscopy, November, p. 861

64. *Dynamic Modulus*

Engineering and Molding Properties of Poly(Vinyl Chloride), Acrylonitrile-Butadiene-Styrene and Polyester Blends, S. K. Khanna and W. I. Congdon, *Mid-August, p. 627*

Viscoelastic Properties of Polyamic Acid Solutions— Precursors of Polyimides, S. A. Jenekhe, *September, p. 713*

E

65. *Elasticity*

Vulcanization Shrinkage of Rubber Articles with Rigid Armoring Parts, L. I. Tukachinski, *April, p. 350*

Rebound Test to Measure The Strength of Polymeric Materials, T. Casiraghi, *November, p. 902*

Elastic Moduli of Highly Oriented Polyoxymethylene, C. L. Choy, W. P. Leung, and C. W. Huang, *November, p. 910*

66. *Electrical Properties*

Electron Transport Processes in Conductor-Filled Polymers, R. D. Sherman, L. M. Middleman, and S. M. Jacobs, *January, p. 36*

Effects of Axial Stretching on the Resistivity of Carbon Black Filled Silicone Rubber, J. Kost, M. Narkis, and A. Foux, *July, p. 567*

67. *Electron Beam Resists*

Evaluation of Poly(Allyl Methacrylate)-co-(Hydroxyethyl Methacrylate) as Negative Electron-Beam Resist, Z. C. H. Tan and S. S. Georgia, *Mid-December, p. 963*

A Dry-Etch Resistant Positive-Working Electron Resist, E. D. Roberts, *Mid-December, p. 968*

Recent Resist Developments in Japan—A Review, S. Nonogaki, *December, p. 985*

Poly(methyl α-Trifluoromethylacrylate) as a Positive Electron Beam Resist, C. G. Willson, H. Ito, D. C. Miller and T. G. Tessier, *December, p. 1000*

A Breakthrough to the Plasma Deposited Dry-Developable e-Beam Resist, S. Hattori, S. Morita, M. Yamada, J. Tamano and M. Ieda, *December, p. 1043*

Poly(4-chlorostyrene), A New High Contrast Negative E-Beam Resist, J. Liutkus, M. Hatzakis, J. Shaw and J. Paraszczak, *December, p. 1047*

Organosilicon Polymers for Lithographic Applications, J. M. Shaw, M. Hatzakis, J. Paraszczak, J. Liutkus, E. Babich, *December, p. 1054*

68. *Electron Irradiation*

Characterization of Electron Beam Crosslinked Poly(styrene-block-ethylene-co-butylene-block-styrene), D. E. Zurawski and L. H. Sperling, *June, p. 510*

69. *Electron Lithography*

Effect of Varying the Composition of Copolymers of Glycidyl Methacrylate and

3-Chlorostyrene (GMC) on Electron Lithographic Performance, A. E. Novembre and M. J. Bowden, *Mid-December, p. 975*

Electron Beam Lithography of Copolymeric Resists Containing Styrenes and Allyl Acrylates, J. Shu, W. Lee, L. Venable and G. Varnell, *Mid-December, p. 980*

70. Elongation

Parameter Design Model for Corrugated Tubing, H. L. Krein, *Mid-April, p. 285*

Elongation Rheology of Polyolefins and its Relation to Processability, D. H. Sebastian and J. R. Dearborn, *July, p. 572*

71. Energy Cost

Low-Energy Solvent Separation Method, T. G. Gutowski, N. P. Suh, C. Cangialose, and G. M. Berube, *March, p. 230*

72. Engineering Plastics

Melt Viscosity Behavior of Some Engineering Thermoplastics, R. A. Mendelson, *Mid-February, p. 79*

73. Enthalpy

Physical Aging in Polystyrene: Comparison of the Changes in Creep Behavior with the Enthalpy Relaxation, R-J. Roe and G. M. Millman, *April, p. 318*

Hydrogen Bonding Potential, HBP: A Model for Predicting Resin Solubilities in Organic Solvents, P. E. Rider, *October, p. 810*

Effect of Molecular Weight on Rate of Enthalpy Relaxation of Poly (Methyl Methacrylate) and Its Oligomers, H. Yoshida and Y. Kobayashi, *November, p. 907*

74. Epoxies

Equilibrium Solubility and Permeability of Sulfur Dioxide in Epoxy Resin of Aliphatic Diglycidyl Ether, G. R. Ranade, V. M. Nadgir, C. A. Plank, and W. L. S. Laukhuf, *January, p. 6*

Flow Instabilities of Epoxide Prepolymers, J. V. Aleman, *March, p. 177*

Influence of External Environments on Fatigue Crack Growth in Epoxy Resin, K. Mizutani and T. Iwatsu, *March, p. 183*

Thermokinetic Modeling of an Epoxy Resin I. Chemoviscosity, Y. A. Tajima and D. Crozier, *March, p. 186*

Moldability Studies in Reactive Polymer Processing, L. T. Manzione and J. S. Osinski, *July, p. 576*

Characterization of Fast-Cure Resins for Reaction Injection Molding, J. S. Osinski, *September, p. 756*

75. Excimer Laser Lithography

Ultrafast Deep UV Lithography Using Excimer Lasers, K. Jain, S. Rice, and B. J. Lin, *December, p. 1019*

76. Extractors

Design of Two-Stage Extractor Screws, P. H. Squires, *April, p. 299*

77. Extruders

Mathematical Modeling of Melting of Polymers in Barrier-Screw Extruders, B. Elbirli, J. T. Lindt, S. R. Gottgetreu, and S. M. Baba, *Mid-February, p. 86*

Design of Two-Stage Extractor Screws, P. H. Squires, *April, p. 299*

The Length of a Transfer Unit (LTU) for Polymer Devolatilization Processes in Screw Extruders, G. P. Collins, C. D. Denson, and G. Astarita, *April, p. 323*

Compounding Extruders for Improved Polyblends, K. Eise, J. Curry, and J. F. Nangeroni, *Mid-August, p. 642*

78. Extrusion

Residence Time Distribution of Polymer Melts in the Linearly Tapered Coat-Hanger Die, Y. Matsubara, *January, p. 17*

Analysis of Mixing in Modified Single Screw Extruders, I. Erwin and F. Mokhtarian, *Mid-February, p. 49*

Shear Stress at Polymer/Metal Interface During Melting in Extrusion, D. E. McClelland and C. I. Chung, *Mid-February, p. 100*

Analytical Melting Model for Extrusion: Stress of Fully Compacted Solid Polymers, K. H. Chung, and C. I. Chung, *March, p. 191*

Laminar Mixing of Polymeric Liquids, A Brief Review and Recent Theoretical Developments, J. M. Ottino and R. Chella, *May, p. 357*

Extrusion and Melt Spinning Characteristics of Thermally Degraded Polypropylene, H. Yamane and J. L. White, *June, p. 516*

Annealing of Ultra-Oriented High Density Polyethylene Extrudates, A. Tsuruta, T. Kanamoto, K. Tanaka, and R. Porter, *June, p. 521*

Fiber Fracture in Reinforced Thermoplastic Processing, R. Von Turkovich and L. Erwin, *September, p. 743*

F

79. Failure

Failure of Rubber-Modified Plastic Liners, Y. W. Mai, *July, p. 560*

80. Fatigue

Influence of External Environments on Fatigue Crack Growth in Epoxy Resin, K. Mizutani and T. Iwatsu, *March, p. 183*

81. Fiber Length Reduction

Fiber Fracture in Reinforced Thermoplastic Processing, R. Von Turkovich and L. Erwin, *September, p. 743*

82. Filled Polymer

The Effect of Storage Temperature on the Mobile Water Content and the Fracture Toughness of a Filled-Polymeric System, R. W. Cahill, *March, p. 197*

Rheological Behavior of Highly Filled Polymer Melts, D. M. Bigg, *March, p. 206*

Sandwich Injection Molding of Thermotropic Copolyesters and Filled Polyester, D. G. Baird and G. L. Wilkes, *Mid-August, p. 632*

83. Fillers

A Phenomenological Master Curve for Viscosity—Structure Data for Two Phase Polymer Systems in Simple Shear Flow, J. Lyngaae-Jorgensen, *Mid-August, p. 610*

Factors Affecting the Mechanical Properties of Mica-Filled Polypropylenes, C. Busigin, G. M. Martinez, R. T. Woodhams, and R. Lahtinen, *Mid-October, p. 766*

84. Film Modification

Dynamics of Ion Beam Modification of Polymer Films, T. Venkatesan, W. L. Brown, C. A. Murray, K. J. Marcantonio and B. J. Wilkens, *Mid-December, p. 931*

85. Flow

Residence Time Distribution of Polymer Melts in the Linearly Tapered Coat-Hanger Die, Y. Matsubara, *January, p. 17*

Filling Thin Cavities of Variable Gap Thickness: A Numerical And Experimental Investigation, C. A. Hieber, L. S. Socha, S. F. Shen, K. K. Wang, and A. I. Isayev, *January, p. 20*

Newtonian Sintering Simulator of Two Spherical Particles, N. Rosenzweig and M. Narkis, *January, p. 32*

Analysis of Mixing in Modified Single Screw Extruders, L. Erwin and F. Mokhtarian, *Mid-February, p. 49*

A Model of Compression Mold Filling, C. L. Tucker, III, and F. Folgar, *Mid-February, p. 69*

Flow Instabilities of Epoxide Prepolymers, J. V. Aleman, *March, p. 177*

Orientation Development in Thermotropic Liquid Crystal Polymers, Y. Ide and Z. Ophir, *Mid-April, p. 261*

Investigation of the Solvent Evaporation Effect on Spin Coating of Thin Films, B. T. Chen, *May, p. 399*

Elongation Rheology of Polyolefins and its Relation to Processability, D. H. Sebastian and J. R. Dearborn, *July. p. 572*

The Flow of a Polymerizing Liquid in a Cylindrical Pipe, A. Y. Malkin, L. I. Sherysheva, S. G. Kulichikhin, P. V. Zhirkov, *October, p. 804*

Modeling Nonlinear Viscoelastic Response, Y. Partom, I. Schanin, *October, p. 849*

86. Fluid Mechanics

The Length of a Transfer Unit (LTU) for Polymer Devolatilization Processes in Screw Extruders, G. P. Collins, C. D. Denson, and G. Astarita, *April, p. 323*

Distribution of Striation Thickness from Impingement Mixers in Reaction Injection Molding, J. Baldyga and J. R. Bourne, *July, p. 556*

87. Fluorescence

Fluorescence Study of Polymer Chain Interpenetration and of the Rate of Phase Separation in Incompatible Polymer Blends, H. Morawetz, *August, p. 689*

88. Foam

Some Mechanical Properties of Rigid Polyurethane Structural Foam, J. M. Lifshitz, *February, p. 144*

Thermal Conductivity of Plastic Foams, R. J. J. Williams and C. M. Aldao, *April, p. 293*

89. Fracture

Notch Sensitivity and Fractography of Polyolefins, R. D. Goolsby and A. M. Chatterjee, *February, p. 117*

Influence of External Environments on Fatigue Crack Growth in Epoxy Resin, K. Mizutani and T. Iwatsu, *March, p. 183*

Toughened Nylon Resins, S. Y. Hobbs, R. C. Bopp, and V. H. Watkins, *May, p. 380*

Influence of Mineral Oils on Polystyrene Fracture, E. Paredes, A. Bustamante, and L. Rivas, *June, p. 498*

90. Fracture Toughness

The Effect of Storage Temperature on the Mobile Water Content and the Fracture Toughness of a Filled-Polymeric System, R. W. Cahill, *March, p. 197*

Plane Strain Fracture Toughness of Polyethylene Pipe Materials, J. F. Mandell, D. R. Roberts, and F. J. McGarry, *May, p. 404*

Failure of Rubber-Modified Plastic Liners, Y. W. Mai, *July, p. 560*

A Novel Technique for Measuring the Impact Properties of a Tough Polyethylene, R. W. Truss, R. A. Duckett, and I. M. Ward, *September, p. 708*

Fracture Toughness of a Short-Fiber Reinforced Thermoplastic, W. E. Haskell, III, S. P. Petrie, and R. W. Lewis, *Mid-October, p. 771*

G

91. Gas Solubility

An Observation on the Han-Villamizar Critical Pressure Concept in Thermoplastic Foams, J. L. Throne, *April, p. 354*

92. Gate Geometry

Influence of Mold Design on the Mechanical Properties of High-Pressure Injection-Molded Polyethylene, J. Kurat, J.-A. Manson, and M. Rigdahl, *November, p. 877*

93. Gel Fiber Drawing

Review on Processing Ultra High Tenacity Fibers From Flexible Polymer, T. Ohta, *September, p. 697*

94. Gel Point

Determination of Time Independent Component of the Complex Modulus During Cure of Thermosetting Systems, R. J. Farris and C. Lee, *July, p. 586*

95. Graft Copolymers

Blending of Polystyrene With Styrene-Siloxane Block and Graft Copolymers, P. Bajaj, D. C. Gupta, and S. K. Varshney, *October, p. 820*

96. Griffith Plot

Review on Processing Ultra High Tenacity Fibers From Flexible Polymer, T. Ohta, *September, p. 697*

97. G. Values

X-Ray Photochemistry: ω-Chloro Olefin Sulfones, M. Kaplan, *Mid-December, p. 957*

H

98. Head-to-Head Polymers

Head-to-Head Polymers 27: Thermal Degradation of Head-to-Head Polyisobutylene, M. Malanga, F. Xi, and O. Vogl, *March, p. 226*

Head-to-Head Polymers, XXV: Properties of Head-to-Head Polyisobutylene, M. Malanga and O. Vogl, *July, p. 597*

99. Heating Mechanism

Heating and Bonding Mechanisms in Ultrasonic Welding of Thermoplastics, M. N. Tolunay, P. R. Dawson, and K. K. Wang, *September, p. 726*

100. Heat Transfer

A Model of Compression Mold Filling, C. L. Tucker, III, and F. Folgar, *Mid-February, p. 69*

Investigation of the Solvent Evaporation Effect on Spin Coating of Thin Films, B. T. Chen, *May, p. 399*

Heat Transfer and Microstructure in Extrusion Blowmolding, M. R. Kamal and K. Kalyon, *June, p. 503*

101. Helix Angle

Design of Two-Stage Extractor Screws, P. H. Squires, *April, p. 299*

102. High Pressure Injection Molding

High Modulus/High Strength Polyethylene Obtained by High-Pressure Injection Molding, J. Kubat and J.-A. Manson, *November, p. 869*

Influence of Mold Design on the Mechanical Properties of High-Pressure Injection-Molded Polyethylene, J. Kubat, J.-A. Manson, and M. Rigdahl, *November, p. 877*

103. Hot Drawing

Review on Processing Ultra High Tenacity Fibers From Flexible Polymer, T. Ohta, *September, p. 697*

104. Hydrodynamic Volume

Copolymer Composition as a Function of Molecular Weight for Poly(Styrene-Methyl Methacrylate) Initiated by Ethylaluminum Sesquichloride, R. W. Nunes, S. J. Huang, and J. F. Johnson, *January, p. 1*

105. Hydrogen Bonding

Vibrational Spectroscopic Characterization of Rigid Rod Polymers: IV. Crystalline Modifications of Poly(p-phenylene terephthalamide), D. Y. Shen, S. E. Molis, and S. L. Hsu, *July, p. 543*

NMR Characterization of Intermolecular Interactions for Polymers, IV. Intermolecular Interactions of Low Molecular Weight Analogues for Compatible Blends of Polystyrene and Poly (2,6-Dimethyl-1, 4-Phenylene Oxide), M. B. Djordjevic and R. S. Porter, *August, p. 650*

On the Application of Fourier Transform Infrared Spectroscopy to the Elucidation of Specific Interactions in Miscible Polyester-Poly (vinyl chloride) Blends, D. F. Varnell, E. J. Moskala, P. C. Painter, and M. M. Coleman, *August, p. 658*

Hydrogen Bonding in Polymer Systems, F. Cangelosi and M. T. Shaw, *August, p. 669*

Hydrogen Bonding Potential, HBP: A Model for Predicting Resin Solubilities in Organic Solvents, P. E. Rider, *October, p. 810*

Plasma Developable Photoresist Containing Electronic Excitation Energy Quenching System, M. Tsuda, S. Oikawa, A. Yokota, M. Yabuta, W. Kanai, K. Kashiwagi, I. Hijikata and H. Nakane, *December, p. 993*

106. Hydraulic Stability

The Effect of Storage Temperature on the Mobile Water Content and the Fracture Toughness of a Filled-Polymeric System, R. W. Cahill, *March, p. 197*

The Hydrolytic Stability of Glass Fiber Reinforced Poly(butylene terephthalate). Poly(ethylene terephthalate) and Polycarbonate, P. G. Kelleher, R. P. Wentz, M. Y. Hellman, and E. H. Gilbert, *July, p. 537*

I

107. Impact Properties

Super Strong Polymers in Planar Directions, A. E. Zachariades and J. Economy, *Mid-April, p. 266*

Mechanical Properties of Injection Molded Blends of Poly(Ethylene-Terephthalate) and Poly(Amide-6,6), M. R. Kamal, M. A. Sahto, and L. A. Utracki, *Mid-August, p. 637*

A Novel Technique for Measuring the Impact Properties of a Tough Polyethylene, R. W. Truss, R. A. Duckett, and I. M. Ward, *September, p. 708*

Properties of Phenolic Fiber-Reinforced Polymers, L. J. Broutman, *Mid-October, p. 776*

108. Impact Response

Toughened Nylon Resins, S. Y. Hobbs, R. C. Bopp, and V. H. Watkins, *May, p. 380*

Polyurethane-Poly(Methyl Methacrylate) Interpenetrating Polymer Networks: Some Mechanical Properties, A. Morin, H. Djomo, and G. C. Meyer, *May, p. 394*

109. Impact Testing

Analysis of the Puncture of a Bisphenol-A Polycarbonate Disc, R. P. Nimmer, *February, p. 155*

Rebound Test to Measure The Strength of Polymeric Materials, T. Casiraghi, *November, p. 902*

110. Infrared Dichroism

New Techniques for the Characterization of Orientation in Semicrystalline Polymer Moldings, R. J. Samuels, *Mid-April, p. 257*

111. Infrared Spectroscopy

Vibrational Spectroscopic Characterization of Rigid Rod Polymers: IV. Crystalline Modifications of Poly(p-phenylene terephthalamide), D. Y. Shen, S. E. Molis, and S. L. Hsu, *July, p. 543*

On the Application of Fourier Transform Infrared Spectroscopy to the Elucidation of Specific Interactions in Miscible Polyester-Poly(Vinyl Chloride) Blends, D. F. Varnell, E. J. Moskala, P. C. Painter, and M. M. Coleman, *August, p. 658*

Competitive Equilibria in Miscible Polymer Blends and Low Molecular Weight Analogues: A Fourier Transform Infrared Study, A. Garton, *August, p. 663*

Fourier Transform Infrared Studies of Poly(Vinyl Chloride) Blends with Ethylene Co- and Terpolymers, M. Iskandar, C. Tran, L. M. Robeson, and J. E. McGrath, *August, p. 682*

112. Instrumentation

Process Control of Injection Molding, B. Sanschagrin, *Mid-June, p. 431*

113. Interaction Parameter

A Comparison of Miscible Binary Blend Interaction Parameters Measured by Different Methods, J. E. Harris, D. R. Paul, and J. W. Barlow, *August, p. 676*

114. Interpenetrating Polymer Networks

Polyurethane-Poly(Methyl Methacrylate) Interpenetrating Polymer Networks: Some Mechanical Properties, A. Morin, H. Djomo, and G. C. Meyer, *May, p. 394*

The Stability of Blends of Incompatible Thermoplastics, B. Maxwell, and G. L. Jasso, *Mid-August, p. 614*

Fluorescence Study of Polymer Chain Interpenetration and of The Rate of Phase Separation in Incompatible Polymer Blends, H. Morawetz, *August, p. 689*

A Survey of Dual Phase Continuity and Miscibility in Interpenetrating Polymer Networks, Making Use of Selective Decrosslinking and Dissolution of One Component: Poly(n-Butyl Acrylate)/-Polystyrene, L. H. Sperling and J. M. Widmaier, *August, p. 693*

115. Ion Beam Irradiation

Dynamics of Ion Beam Modification of Polymer Films, T. Venkatesan, W. L. Brown, C. A. Murray, K. J. Marcantonio and B. J. Wilkens, *Mid-December, p. 931*

116. Ion Beam Resists

Submicron Patterns in Substituted Polystyrene Resists by Focused-Ion-Beam Lithography, R. G. Brault, R. L. Kubena and J. E. Jensen, *Mid-December, p. 941*

K

117. Ketocoumarins

Ketocoumarins as Photosensitizers and Photoinitiators, J. L. R. Williams, D. P. Specht and S. Farid, *December, p. 1022*

118. Kinetics

Isothermal and Nonisothermal Crystallization of Polyethylene, M. R. Kamal and E. Chu, *January, p. 27*

The Rate of Crystallization of Poly(Ethylene Terephthalate) by Differential Scanning Calorimetry, C. C. Lin, *February, p. 113*

Characterizing Photoresists by Thermal Analysis, B. K. Appelt, *February, p. 125*

Thermokinetic Modeling of an Epoxy Resin I. Chemoviscosity, Y. A. Tajima and D. Crozier, *March, p. 186*

Chemiluminescence Studies of the Degradation and Stabilization of Polymers, G. A. George, G. T. Egglestone, and S. Z. Riddell, *May, p. 412*

Bulk Copolymerization of Styrene-Acrylic Esters: Some Analysis and Design Considerations, K. S. Balaraman, B. D. Kulkarni, and R. A. Mashelkar, *September, p. 719*

Characterization of Fast-Cure Resins for Reaction Injection Molding, J. S. Osinski, *September, p. 756*

The Flow of a Polymerizing Liquid in Cylindrical Pipe, A. Y. Malkin, L. I. Sherysheva, S. G. Kulichikhin, and P. V. Zhirkov, *October, p. 804*

119. Kneading Blocks

Compounding Extruders for Improved Polyblends, K. Eise, J. Curry, and J. F. Nangeroni, *Mid-August, p. 642*

L

120. Laminar Mixing

Laminar Mixing of Polymeric Liquids: A Brief Review and Recent Theoretical Developments, J. M. Ottino and R. Chella, *May, p. 357*

121. Lasers

Ultrafast Deep UV Lithography Using Excimer Lasers, K. Jain, S. Rice, and B. J. Lin, *December, p. 1019*

122. Liquid Crystalline Polymers

Orientation Development in Thermotropic Liquid Crystal Polymers, Y. Ide and Z. Ophir, *Mid-April, p. 261*

Sandwich Injection Molding of Thermotropic Copolyesters and Filled Polyester, D. G. Baird and G. L. Wilkes, *Mid-August, p. 632*

Thermal and Rheological Properties of Blends of Polystyrene and Thermotropic Liquid Crystals, W. Huh, R. A. Weiss, and L. Nicholais, *Mid-October, p. 779*

Injection Molding of Thermotropic Liquid Crystal Polymers, Z. Ophir and Y. Ide, *Mid-October, p. 792*

The Preparation of Oriented Morphologies of the Thermotropic Aromatic Copolyester of Poly(ethylene Terephthalate) and 80 Mole Percent p-Acetoxybenzoic Acid, A. E. Zachariades and J. A. Logan, *October, p. 797*

123. Loss Modulus

Dynamic Mechanical Studies of Thermal Aging in Poly (Vinyl Chloride), E. J. Roche, *May, p. 390*

M

124. Mask Replication

Proximity Printing of Chrome Masks, D. Meyerhofer and J. Mitchell, *December, p. 990*

125. Mass Spectrometry

Dynamics of Ion Beam Modification of Polymer Films, T. Venkatesan, W. L. Brown, C. A. Murray, K. J. Marcantonio and B. J. Wilkens, *Mid-December, p. 931*

126. Mass Transfer

Investigation of the Solvent Evaporation Effect on Spin Coating of Thin Films, B. T. Chen, *May, p. 399*

127. Mathematical Analysis

Residence Time Distribution of Polymer Melts in the Linearly Tapered Coat-Hanger Die, Y. Matsubara, *January, p. 17*

Isothermal and Nonisothermal Crystallization of Polyethylene, M. R. Kamal and E. Chu, *January, p. 27*

Effects of Protonation on the Conformational Characteristics and Geometry of the Rod-like Benzobisoxazole Polymers, W. J. Welsh and J. E. Mark, *February, p. 140*

Analysis of the Puncture of a Bisphenol-A Polycarbonate Disc, R. P. Nimmer, *February, p. 155*

Effects of Strain Rate and Temperature Upon Tensile Properties of Acetal Copolymers, K. F. Wissbrun, *March, p. 216*

Thermal Conductivity of Plastic Foams, R. J. J. Williams and C. M. Aldao, *April, p. 293*

The Length of a Transfer Unit (LTU) for Polymer Devolatilization Processes in Screw Extruders, G. P. Collins, C. D. Denson and G. Astarita, *April, p. 323*

Vulcanization Shrinkage of Rubber Articles with Rigid Armoring Parts, L. I. Tukachinski, *April, p. 350*

Laminar Mixing of Polymeric Liquids, A Brief Review and Recent Theoretical Developments, J. M. Ottino and R. Chella, *May, p. 357*

Process Control of Injection Molding, B. Sanschagrin, *Mid-June, p. 431*

Pressure Dependence of Newtonian Viscosity, L. A. Utracki, *Mid-June, p. 446*

Steady-Shear Rheological Behavior of the Suspension of Spherical Particles in a Second-Order Fluid, P. N. Kaloni and V. Stastna, *Mid-June, p. 465*

The Dual-Mode Solution and Transport of Water in Poly(acrylonitrile), G. R. Mauze and S. A. Stern, *July, p. 548*

Determination of Time Independent Component of the Complex Modulus During Cure of Thermosetting Systems, R. J. Farris and C. Lee, *July, p. 586*

Compounding Extruders for Improved Polyblends, K. Eise, J. Curry, and J. F. Nangeroni, *Mid-August, p. 642*

Characterization of Fast-Cure Resins for Reaction Injection Molding, J. S. Osinski, *September, p. 756*

The Flow of a Polymerizing Liquid in a Cylindrical Pipe, A. Y. Malkin, L. I. Sherysheva, S. G. Kulichikhin, and P. V. Zhirkov, *October, p. 804*

Viscoelastic Behavior of Amorphous Polymers in the Glass-Rubber Transition Region: Birefringence Studies, B. E. Read, *October, p. 835*

Stress-Relaxation Crazing of Polymers—An Energy Criterion, O. S. Brueller, *October, p. 844*

128. *Mathematical Model*

Filling Thin Cavities of Variable Gap Thickness: A Numerical and Experimental Investigation, C. A. Hieber, L. S. Socha, S. F. Shen, K. K. Wang, and A. I. Isayev, *January, p. 20*

Newtonian Sintering Simulator of Two Spherical Particles, N. Rosenzweig and M. Narkis, *January, p. 32*

Electron Transport Processes in Conductor-Filled Polymers, R. D. Sherman, L. M. Middleman, and S. M. Jacobs, *January, p. 36*

Analysis of Mixing in Modified Single Screw Extruders, L. Erwin and F. Mokhtarian, *Mid-February, p. 49*

A Model of Compression Mold Filling, C. L. Tucker, III, and F. Folgar, *Mid-February, p. 69*

Mathematical Modeling of Melting of Polymers in Barrier-Screw Extruders, B. Elbirli, J. T. Lindt, S. R. Gottgetreu, and S. M. Baba, *Mid-February, p. 86*

Predicting Conversion Using Temperature as the Measured Variable for the RIM Process. Part I: Simulation and Measurement Structure, J. A. Romagnoli and J. Castro, *Mid-February, p. 105*

Modeling of Transport of Small Molecules in Polymer Blends: Application of Effective Medium Theory, J. Sax and J. M. Ottino, *February, p. 165*

Thermokinetic Modeling of an Epoxy Resin I. Chemoviscosity, Y. A. Tajima and D. Crozier, *March, p. 186*

Analytical Melting Model for Extrusion: Stress of Fully Compacted Solid Polymers, K. H. Chung and C. I. Chung, *March, p. 191*

Parameter Design Model for Corrugated Tubing, H. L. Krein, *Mid-April, p. 285*

Toughened Nylon Resins, S. Y. Hobbs, R. C. Bopp, and V. H. Watkins, *May, p. 380*

Zero Migration of Monomers in Glassy Polymers: A Possible Artifact of Thermal Depolymerization, J. L. Osborne, G. C. Sarti, W. J. Koros, and H. B. Hopfenberg, *June, p. 473*

Heat Transfer and Microstructure in Extrusion Blowmolding, M. R. Kamal and D. Kalyon, *June, p. 503*

Distribution of Striation Thickness from Impingement Mixers in Reaction Injection Molding, J. Baldyga and J. R. Bourne, *July, p. 556*

Moldability Studies in Reactive Polymer Processing, L. T. Manzione and J. S. Osinski, *July, p. 576*

A Phenomenological Master Curve for Viscosity—Structure Data for Two Phase Polymer Systems in Simple Shear Flow, J. Lyngaae-Jorgensen, *Mid-August, p. 610*

Bulk Copolymerization of Styrene-Acrylic Esters: Some Analysis and Design Considerations, K. S. Balaraman, B. D. Kulkarni, and R. A. Mashelkar, *September, p. 719*

Hydrogen Bonding Potential, HBP: A Model for Predicting Resin Solubilities in Organic Solvents, P. E. Rider, *October, p. 810*

Blowing of Oriented PET Bottles: Predictions of Free Blow Size and Shape, L. Erwin, M. A. Pollock, and H. Gonzalez, *October, p. 826*

Modeling Nonlinear Visoelastic Response, Y. Partom and I. Schanin, *October, p. 849*

Predicting Conversion in the Reaction Injection Molding Process. Using Temperature as the Measured Variable Part II: Implementation of the On-Line Corrective Algorithm, O. Del Pino, J. A. Romagnoli, and J. M. Castro, *November, p. 895*

Contrast Enhanced Photoresists—Processing and Modeling, B. F. Griffing and P. R. West, *Mid-December, p. 947*

Proximity Printing of Chrome Masks, D. Meyerhofer and J. Mitchell, *December, p. 990*

Design of a Positive Resist for Projection Lithography in the Mid-UV, G. Willson, R. Miller, D. McKean, N. Clecak, T. Tompkins, D. Hofer, J. Michl and J. Downing, *December, p. 1004*

129. *Mechanical Behavior*

Structure-Properties Relationships in Biaxially Oriented Polypropylene Films, A. J. De Vries, *Mid-April, p. 241*

A Survey of Dual Phase Continuity and Miscibility in Interpenetrating Polymer Networks, Making Use of Selective Decrosslinking and Dissolution One Component: Poly (n-Butyl Acrylate)/-Polystyrene, L. H. Sperling and J. M. Widmaier, *August, p. 693*

Deformation Studies of Polystyrene/Poly(Vinyl Methyl Ether) Blends by Mechanical-Vibrational Spectroscopy, F. J. Lu, D. J. Burchell, N. Li and S. L. Hsu, *November, p. 861*

130. *Mechanical Properties*

Some Mechanical Properties of Rigid Polyurethane Structural Foam, J. M. Lifshitz, *February, p. 144*

Analysis of the Puncture of a Bisphenol—A Polycarbonate Disc, R. P. Nimmer, *February, p. 155*

Residual Stress Craze and Crack Formation in Poly(Methyl Methacrylate), L. Bevan and H. Nugent, *March, p. 211*

Orientation Development in Thermotropic Liquid Crystal Polymers, Y. Ide and Z. Ophir, *Mid-April, p. 261*

Super Strong Polymers in Planar Directions, A. E. Zachariades and J. Economy, *Mid-April, p. 266*

Physical Properties of High-Pressure Ethylene Vinylacetate Copolymers and Their Saponified Derivatives, R. J. Koopmans, R. Van Der Linden, and E. F. Vansant, *April, p. 306*

Properties of Polyisobutylene-Polyurethane Block Copolymers: I. Macroglycols from Ozonolysis of Isobutylene-Isoprene Copolymer, T. A. Speckhard, G. Ver Strate, P. E. Gibson, *April, p. 337*

Dynamic Mechanical Studies of Thermal Aging in Poly (Vinyl Chloride), E. J. Roche, *May, p. 390*

Dynamic Mechanical and Thermomechanical Properties of Silicone-Polycarbonate Block Copolymers, W. Maung, K. M. Chua, T. H. Ng, and H. L. Williams, *Mid-June, p. 439*

Effect of the Addition of EPM Copolymers on the Properties of High Density Polyethylene/Isotactic Polypropylene Blends: II. Morphology and Mechanical Properties of Extruded Samples, L. D'Orazio, R. Greco, E. Martuscelli, and G. Ragosta, *June, p. 489*

Influence of Mineral Oils on Polystyrene Fracture, E. Paredes, A. Bustamante, and L. Rivas, *June, p. 498*

Failure of Rubber-Modified Plastic Liners, Y. W. Mai, *July, p. 560*

Engineering and Molding Properties of Poly(Vinyl Chloride), Acrylonitrile-Butadiene-Styrene and Polyester Blends, S. K. Khanna and W. I. Congdon, *Mid-August, p. 627*

Factors Affecting the Mechanical Properties of Mica-Filled Polypropylenes, C. Busigin, G. M. Martinez, R. T. Woodhams, and R. Lahtinen, *Mid-October, p. 766*

Fracture Toughness of a Short-Fiber Reinforced Thermoplastic, W. E. Haskell, III, S. P. Petrie, and R. W. Lewis, *Mid-October, p. 771*

Injection Molding of Thermotropic Liquid Crystal Polymers, Z. Ophir, and Y. Ide, *Mid-October, p. 792*

The Preparation of Oriented Morphologies of the Thermotropic Aromatic Copolyester of Poly(Ethylene Terephthalate) and 80 Mole Percent p-Acetoxybenzoic Acid, A. E. Zachariades and J. A. Logan, *October, p. 797*

Blending of Polystyrene With Styrene-Siloxane Block and Graft Copolymers, P. Bajaj, D. C. Gupta, and S. K. Varshney, *October, p. 820*

High Modulus/High Strength Polyethyiene Obtained by High-Pressure Injection Molding, J. Kubat and J.-A. Man-

son, *November, p. 869*

Influence of Mold Design on the Mechanical Properties of High-Pressure Injection-Molded Polyethylene, J. Kubat, J.-A. Manson, and M. Rigdahl, *November, p. 877*

Elastic Moduli of Highly Oriented Polyoxymethylene, C. L. Choy, W. P. Leung, and C. W. Huang, *November, p. 910*

131. Melt

Rheological Behavior of Highly Filled Polymer Melts, D. M. Bigg, *March, p. 206*

132. Melt Elasticity

The Stability of Blends of Imcompatible Thermoplastics, B. Maxwell and G. L. Jasso, *Mid-August, p. 614*

Melt Rheology of Polymer Blends the Morphology Feedback, A. P. Plochock, *Mid-August, p. 618*

133. Melt Flow

Physical Properties of High-Pressure Ethylene Vinylacetate Copolymers and Their Saponified Derivatives, R. J. Koopmans, R. Van Der Linden, and E. F. Vansant, *April, p. 306*

The Hydrolytic Stability of Glass Fiber Reinforced Poly(butylene terephthalate), Poly(ethylene terephthalate) and Polycarbonate, P. G. Kelleher, R. P. Wentz, M. Y. Hellman, and E. H. Gilbert, *July, p. 537*

Melt Flow of Polymer Blends, L. A. Utracki, *Mid-August, p. 602*

Thermal, Mechanical, and Rheological Behavior of Blends of Ultrahigh and Normal-Molecular-Weight Linear Polyethylenes, S.K. Bhateja and E. H. Andrews, *November, p. 888*

134. Melting

Mathematical Modeling of Melting of Polymers in Barrier-Screw Extruders, B. Elbirli, J. T. Lindt, S. R. Gottgetreu, and S. M. Baba, *Mid-February, p. 86*

Analytical Melting Model for Extrusion: Stress of Fully Compacted Solid Polymers, K. H. Chung and C. I. Chung, *March, p. 191*

135. Melt Spinning

A Study of Structural Development in the High Speed Spinning of Poly(Ethylene Terephthalate), H. H. George, A. Holt, and A. Buckley, *Mid-February, p. 95*

Extrusion and Melt Spinning Characteristics of Thermally Degraded Polypropylene, H. Yamane and J. L. White, *June, p. 516*

136. Melt Temperature

The Influence of Knit-Lines on the Tensile Properties of Injection Molded Parts, R. M. Criens and H. G. Mosle, *July, p. 591*

137. Mica

Factors Affecting the Mechanical Properties of Mica-Filled Polypropylenes, C. Busigin, G. M. Martinez, R. T. Woodhams, and R. Lahtinen, *Mid-October, p. 766*

138. Mineral Oils

Influence of Mineral Oils on Polystyrene Fracture, E. Paredes, A. Bustamante, and L. Rivas, *June, p. 498*

139. Miscibility

Aspects of Dispersion and Flow in Thermoplastic-Elastomer Blends, H. P. Schreiber and A. Olguin, *February, p. 129*

Fourier Transform Infrared Studies of Poly(Vinyl Chloride) Blends with Ethylene Co- and Terpolymers, M. Iskandar, C. Tran, L. M. Robeson, and J. E. McGrath, *August, p. 682*

140. Mixing

Analysis of Mixing in Modified Single Screw Extruders, L. Erwin and F. Mokhtarian, *Mid-February, p. 49*

Distribution of Striation Thickness from Impingement Mixers in Reaction Injection Molding, J. Baldyga and J. R. Bourne, *July, p. 556*

Moldability Studies in Reactive Polymer Processing, L. T. Manzione and J. S. Osinski, *July, p. 576*

Melt Rheology of Polymer Blends the Morphology Feedback, A. P. Plochocki, *Mid-August, p. 618*

Compounding Extruders for Improved Polyblends, K. Eise, J. Curry, and J. F. Nangeroni, *Mid-August, p. 642*

141. Modulus

Dynamic Mechanical and Thermomechanical Properties of Silicone–Polycarbonate Block Copolymers, W. Maung, K. M. Chua, T. H. Ng, and H. L. Williams, *Mid-June, p. 439*

Determination of Time Independent Component of the Complex Modulus During Cure of Thermosetting Systems, R. J. Farris and C. Lee, *July, p. 586*

142. Moldability

Moldability Studies in Reactive Polymer Processing, L. T. Manzione and J. S. Osinski, *July, p. 576*

143. Mold Design

Residence Time Distribution of Polymer Melts in the Linearly Tapered Coat-Hanger Die, Y. Matsurbara, *January, p. 17*

Influence of Mold Design on the Mechanical Properties of High-Pressure Injection-Molded Polyethylene, J. Kubat, J.-A. Manson, and M. Rigdahl, *November, p. 877*

144. Mold Filling

Filling Thin Cavities of Variable Gap Thickness: A Numerical and Experimental Investigation, C. A. Hieber, L. S. Socha, S. F. Shen, K. K. Wang, and A. I. Isayev, *January, p. 20*

A Model of Compression Mold Filling, C. L. Tucker, III, and F. Folgar, *Mid-February, p. 69*

Moldability Studies in Reactive Polymer Processing, L. T. Manzione and J. S. Osinski, *July, p. 576*

Sandwich Injection Molding of Thermotropic Copolyesters and Filled Polyester, D. G. Baird and G. L. Wikes, *Mid-August, p. 632*

Injection Molding of Thermotropic Liquid Crystal Polymers, Z. Ophir and Y. Ide, *Mid-October, p. 792*

145. Molecular Composites

Solution Processing and Properties of Molecular Composite Fibers and Films, W-F. Hwang, D. R. Wiff, C. Verschoore, G. E. Price, T. E. Helminiak, and W. W. Adams, *Mid-October, p. 784*

Relationships of Rigid Rod Polymer/-Flexible Coil Polymer/Solvent Ternary Systems, W-F. Hwang, D. R. Wiff, and C. Verschoore, *Mid-October, p. 789*

146. Molecular Geometry

Hydrogen Bonding in Polymer Systems, F. Cangelosi and M. T. Shaw, *August, p. 669*

147. Molecular Interactions

NMR Characterization of Intermolecular Interactions for Polymers, IV. Intermolecular Interactions of Low Molecular Weight Analogues for Compatible Blends of Polystyrene and Poly(2,6-Dimethyl-1,4-Phenylene Oxide), M. B. Djordjevic and R. S. Porter, *August, p. 650*

Competitive Equilibria in Miscible Polymer Blends and Low Molecular Weight Analogues: A Fourier Transform Infrared Study, A. Garton, *August, p. 663*

Hydrogen Bonding in Polymer Systems, F. Cangelosi and M. T. Shaw, *August, p. 669*

Fourier Transform Infrared Studies of Poly(Vinyl Chloride) Blends with Ethylene Co- and Terpolymers, M. Iskandar, C. Tran, L. M. Robeson, and J. E. McGrath, *August, p. 682*

148. Molecular Structure

A Phenomenological Master Curve for Viscosity—Structure Data for Two Phase Polymer Systems in Simple Shear Flow, J. Lyngaae-Jorgensen, *Mid-August, p. 610*

149. Molecular Weight

Copolymer Composition as a Function of Molecular Weight for Poly(Styrene-Methyl Methacrylate) Initiated by Ethylaluminum Sesquichloride, R. W. Nunes, S. J. Huang, and J. F. Johnson, *January, p. 1*

Melt Viscosity Behavior of Some Engineering Thermoplastics, R. A. Mendelson, *Mid-February, p. 79*

The Rate of Crystallization of Poly(Ethylene Terephthalate) by Differential Scanning Calorimetry, C. C. Lin, *February, p. 113*

Notch Sensitivity and Fractography of Polyolefins, R. D. Goolsby and A. M. Chatterjee, *February, p. 117*

Effects of Strain Rate and Temperature Upon Tensile Properties of Acetal Copolymers, K. F. Wissbrun, *March, p. 216*

Head-to-Head Polymers 27: Thermal Degradation of Head-to-Head Polyisobutylene, M. Malanga, F. Xi, and O. Vogl, *March, p. 226*

Shear Modification of Polymers, A. Rudin and H. P. Schreiber, *Mid-June, p. 422*

Pressure Dependence of Newtonian Viscosity, L. A. Utracki, *Mid-June, p. 446*

Relationship Between Polymerization Conditions and Rheological Properties for Styrene-Acrylonitrile Copolymers, A. Garcia-Rejon, C. Rangel-Nafaile, L. Rios, and F. Cid, *Mid-June, p. 452*

150. Molecular Weight Dependence

Studies on Whitening Phenomena Induced by Some Non-Solvents on Highly Oriented Glassy Polymers, N. H. Sung, R. E. Gahan, and R. E. Haven, *April, p. 328*

Hydrogen Bonding in Polymer Systems, F. Cangelosi and M. T. Shaw, *August, p. 669*

Review on Processing Ultra High Tenacity Fibers From Flexible Polymer, T. Ohta, *September, p. 697*

Effect of Molecular Weight on Rate of Enthalpy Relaxation of Poly (Methyl Methacrylate) and Its Oligomers, H. Yoshida and Y. Kobayashi, *November, p. 907*

Evaluation of Poly(Allyl Methacrylate)-co-(Hydroxethyl Methacrylate) as Negative Electron-Beam Resist, Z. C. H. Tan and S. S. Georgia, *Mid-December, p. 963*

Electron Beam Lithography of Copolymeric Resists Containing Styrenes and Allyl Acrylates, J. Shu, W. Lee, L. Venable and G. Varnell, *Mid-December, p. 980*

151. Molecular Weight Distribution

Flow Instabilities of Epoxide Prepolymers, J. V. Aleman, *March, p. 177*

Extrusion and Melt Spinning Characteristics of Thermally Degraded Polypropylene, H. Yamane and J. L. White, *June, p. 516*

Elongation Rheology of Polyolefins and its Relation to Processability, D. H. Sebastian and J. R. Dearborn, *July, p 572*

152. Morphology

Isothermal and Nonisothermal Crystallization of Polyethylene, M. R. Kamal and E. Chu, *January, p. 27*

Notch Sensitivity and Fractography of Polyolefins, R. D. Goolsby and A. M. Chatterjee, *February, p. 117*

Modeling of Transport of Small Molecules in Polymer Blends: Application of Effective Medium Theory, J. Sax and J. M. Ottino, *February, p. 165*

Rheological Behavior of Highly Filled Polymer Melts, D. M. Bigg, *March, p. 206*

Super Strong Polymers in Planar Directions, A. E. Zachariades and J. Economy, *Mid-April, p. 266*

Toughened Nylon Resins, S. Y. Hobbs, R. C. Bopp, and V. H. Watkins, *May, p. 380*

Plane Strain Fracture Toughness of Polyethylene Pipe Materials, J. F. Mandell, D. R. Roberts, and F. J. McGarry, *May, p. 404*

Effect of the Addition of EPM Copolymers on the Properties of High Density Polyethylene/Isotactic Polypropylene Blends: II. Morphology and Mechanical Properties of Extruded Samples, L. D'Orazio, R. Greco, E. Matuscelli, and G. Ragosta, *June, p. 489*

Influence of Mineral Oils on Polystyrene Fracture, E. Paredes, A. Bustamante, and L. Rivas, *June, p. 498*

Heat Transfer and Microstructure in Extrusion Blowmolding, M. R. Kamal and D. Kalyon, *June, p. 503*

Annealing of Ultra-Oriented High Density Polyethylene Extrudates, A. Tsuruta, T. Kanamoto, K. Tanaka, and R. Porter, *June, p. 521*

Head to Head Polymers. XXV: Properties of Head to Head Polyisobutylene, M. Malanga and O. Vogl, *July, p. 597*

Melt Flow of Polymer Blends, L. A. Utracki, *Mid-August, p. 602*

The Stability of Blends of Incompatible Thermoplastics, B. Maxwell and G. L. Jasso, *Mid-August, p. 614*

Melt Rheology of Polymer Blends the Morphology Feedback, A. P. Plochocki, *Mid-August, p. 618*

Sandwich Injection Molding of Thermotropic Copolyesters and Filled Polyester, D. G. Baird and G. L. Wilkes, *Mid-August, p. 632*

A Survey of Dual Phase Continuity and Miscibility in Interpentrating Polymer Networks Making Use of Selective Decrosslinking and Dissolution of One Component: Poly (n-Butyl Acrylate)/-Polystyrene, L. H. Sperling and J. M. Widmaier, *August, p. 693*

Phase Relationships of Rigid Rod Polymer/Flexible Coil Polymer/Solvent Ternary Systems, W-F. Hwang, D. R. Wiff, and C. Verschoore, *Mid-October, p. 789*

Injection Molding of Thermotropic Liquid Crystal Polymers, Z. Ophir and Y. Ide, *Mid-October, p. 792*

The Preparation of Oriented Morphologies of the Thermotropic Aromatic Copolyester of Poly(ethylene Terephthalate) and 80 Mole Percent p-Acetoxybenzoic Acid, A. E. Zachariades and J. A. Logan, *October, p.797*

Effect of Morphology on Stress Relaxation of Polypropylene, G. Attalla, I. B. Guanella, and R. E. Cohen, *November, p. 883*

153. Multilayer Resists

Materials for Multilevel Resist Schemes, E. Reichmanis, C. W. Wilkins, Jr. and E. Ong, *December, p. 1039*

A Breakthrough to the Plasma Deposited Dry-Developable e-Beam Resist, S. Hattori, S. Morita, M. Yamada, J. Tamano and M. Ieda, *December, p. 1043*

Organosilicon Polymers for Lithographic Applications, J. M. Shaw, M. Hatzakis, J. Paraszczak, J. Liutkus, E. Babich, *December, p. 1054*

N

154. Negative Resists

Azide-Phenolic Resin UV Resist (MRL) for Microlithography, T. Iwayanagi, M. Hashimoto, S. Nonogaki, S. Koibuchi and D. Makino, *Mid-December, p. 935*

Submicron Patterns in Substituted Polystyrene Resists by Focused-Ion-Beam Lithography, R. G. Brault, R. L. Kubena and J. E. Jensen, *Mid-December, p. 941*

Evaluation of Poly(Allyl Methacrylate)-co-(Hydroxethyl Methacrylate) as Negative Electron-Beam Resist, Z. C. H. Tan and S. S. Georgia, *Mid-December, p. 963*

Electron Beam Lithography of Copolymeric Resists Containing Styrenes and Allyl Acrylates, J. Shu, W. Lee, L. Venable and G. Varnell, *Mid-December, p. 980*

Poly (4-Chlorostyrene), A New High Contrast Negative E-Beam Resist, J. Liutkus, M. Hatzakis, J. Shaw and J. Paraszczak, *December, p. 1047*

155. Nonequilibrium Properties

Effect of Molecular Weight on Rate of Enthalpy Relaxation of Poly (Methyl Methacrylate) and Its Oligomers, H. Yoshida and Y. Kobayashi, *November, p. 907*

156. Nonlinear Viscoelastic Response

Modeling Nonlinear Viscoelastic Response, Y. Partom and I. Schanin, *October, p. 849*

157. Notch Sensitivity

Notch Sensitivity and Fractography of Polyolefins, R. D. Goolsby and A. M. Chatterjee, *February, p. 117*

158. Nuclear Magnetic Resonance

NMR Characterization of Intermolecular Interactions for Polymers, IV. Intermolecular Interactions of Low Molecular Weight Analogues for Compatible Blends of Polystyrene and Poly(2,6-Dimethyl-1,4-Phenylene Oxide), M. B. Djordjevic and R. S. Porter, *August, p. 650*

159. Nylon

Toughened Nylon Resins, S. Y. Hobbs, R. C. Bopp, and V. H. Watkins, *May, p. 380*

Chemiluminescence Studies of the Degradation and Stabilization of Polymers, G. A. George, G. T. Egglestone, and S. Z. Riddell, *May, p. 412*

Mechanical Properties of Injection Molded Blends of Poly(Ethylene-Terephthalate) and Poly(Amide-6,6), M. R. Kamal, M. A. Sahto and L. A. Utracki, *Mid-August, p. 637*

O

160. Onium Salts

Possibilities for Photoimaging Using Onium Salts, J. V. Crivello, *Mid-December, p. 953*

Chemical Amplification in the Design of Dry Developing Resist Materials, H. Ito and C. G. Willson, *December, p. 1012*

161. Optical Properties

New Techniques for the Characterization of Orientation in Semicrystalline Polymer Moldings, R. J. Samuels, *Mid-April, p. 257*

Thermal Conductivity of Plastic Foams, R. J. J. Williams and C. M. Aldao, *April, p. 293*

Rheological Properties of Blends of Polystyrene and Thermotropic Liquid Crystals, W. Huh, R. A. Weiss, and L. Nicolais, *Mid-October, p. 779*

162. Orientation

Effects of Shearing Conditions on Crystalline Orientation and Relaxation in Polyethylene, E. S. Hsiue, R. E. Robertson, and G. S. Y. Yeh, *Mid-February, p. 74*

A Study of Structural Development in the High Speed Spinning of Poly(Ethylene Terephthalate), H. H. George, A. Holt, and A. Buckley, *Mid-February, p. 95*

The Specification of Orientation and Its Development in Polymer Processing, J. L. White and J. E. Spruiell, *Mid-April, p. 247*

New Techniques for the Characterization of Orientation in Semicrystalline Polymer Moldings, R. J. Samuels, *Mid-April, p. 257*

Orientation Development in Thermotropic Liquid Crystal Polymers, Y. Ide and Z. Ophir, *Mid-April, p. 261*

Super Strong Polymers in Planar Directions, A. E. Zachariades and J. Economy, *Mid-April, p. 266*

Orientation Development in the Injection Molding of Amorphous Polymers, A. I. Isayev, *Mid-April, p. 271*

Studies on Whitening Phenonmena Induced by Some Non-Solvents on Highly Oriented Glassy Polymers, N. H. Sung, R. E. Gahan, and R. E. Haven, *April, p. 328*

Injection Molding of Thermotropic Liquid Crystal Polymers, Z. Ophir and Y. Ide, *Mid-October, p. 792*

163. Ozone Resistance

Characteristics of Polynorbornene and Ethylene-Propylene Terpolymer Blends, C. S. Wang, *June, p. 530*

P

164. Percolation

Electron Transport Processes in Conductor-Filled Polymers, R. D. Sherman, L. M. Middleman, and S. M. Jacobs, *January, p. 36*

165. Permeability

Equilibrium Solubility and Permeability of Sulfur Dioxide in Epoxy Resin of Aliphatic Diglycidyl Ether, G. R. Ranade, V. M. Nadgir, C. A. Plank, and W. L. S. Laukhuf, *January, p. 6*

Modeling of Transport of Small Molecules in Polymer Blends: Application of Effective Medium Theory, J. Sax and J. M. Ottino, *February, p. 165*

The Dual-Mode Solution and Transport of Water in Poly(acrylonitrile), G. R. Mauze and S. A. Stern, *July, p. 548*

Diffusion of Ethyl Acetate Vapor in Strained Low Density Polyethylene, J. C. Phillips and A. Peterlin, *September, p. 734*

166. Phase Separation

Low-Energy Solvent Method, T. G. Gutowski, N. P. Suh, C. Cangialose, and G. M. Berube, *March, p. 230*

Properties of Polyisobutylene-Polyurethane Block Copolymers:I. Macroglycols from Ozonolysis of Isobutylene-Isoprene Copolymer, T. A. Speckhard, G. Ver Strate, P. E. Gibson, and S. L. Cooper, *April, p. 337*

Fluorescence Study of Polymer Chain Interpenetration and of the Rate of Phase Separation in Incompatible Polymer Blends, H. Morawetz, *August, p. 689*

Phase Relationships of Rigid Rod Polymer/Flexible Coil Polymer/Solvent Ternary Systems, W-F. Hwang, D. R. Wiff, and C. Verschoore, *Mid-October, p. 789*

Effect of a Diamine Additive on the Structure-Property Relationships of RIM Polyurethane Elastomers, J. Blackwell, J. Quay, and R. B. Turner, *October, p. 816*

Deformation Studies of Polystyrene/-Poly(Vinyl Methyl Ether) Blends by Mechanical-Vibrational Spectroscopy, F. J. Lu, D. J. Burchell, N. Li and S. L. Hsu, *November, p. 861*

167. Phases Model

Modeling Nonlinear Viscoelastic Response, Y. Partom and I. Schanin, *October, p. 849*

168. Phenolic Fibers

Properties of Phenolic Fiber-Reinforced Polymers, L. J. Broutman, *Mid-October, p. 776*

169. Phenoxies

Competitive Equilibria in Miscible Polymer Blends and Low Molecular Weight Analogues: A Fourier Transform Infrared Study, A. Garton, *August, p. 663*

A Comparison of Miscible Binary Blend Interaction Parameters Measured by Different Methods, J. E. Harris, D. R. Paul, and J. W. Barlow, *August, p. 676*

170. Photochemistry

Possibilities for Photoimaging Using Onium Salts, J. V. Crivello, *Mid-December, p. 953*

X-Ray Photochemistry: ω-Chloro Olefin Sulfones, M. Kaplan, *Mid-December, p. 957*

171. Photoinitiators

Ketocoumarins as Photosensitizers and Photoinitiators, J. L R. Williams, D. P. Specht and S. Farid, *December, p. 1022*

172. Photoresists

Characterizing Photoresists by Thermal Analysis, B. K. Appelt, *February, p. 125*

Profile Modification of Resist Patterns in Optical Lithography, F. A. Vollenbroek, E. J. Spiertz and H. J. J. Kroon, *Mid-December, p. 925*

Azide-Phenolic Resin UV Resist (MRL) for Microlithography, T. Iwayanagi, M. Hashimoto, S. Nonogaki, S. Koibuchi and D. Makino, *Mid-December, p. 935*

Contrast Enhanced Photoresists —Processing and Modeling, B. F. Griffing and P. R. West, *Mid-December, p. 947*

Possibilities for Photoimaging Using Onium Salts, J. V. Crivello, *Mid-December, p. 953*

Recent Resist Developments in Japan—A Review, S. Nonogaki, *December, p. 985*

Proximity Printing of Chrome Masks, D. Meyerhofer and J. Mitchell, *December, p. 990*

Plasma Developable Photoresist Containing Electronic Excitation Energy Quenching System, M. Tsuda, S. Oikawa, A. Yokota, M. Yabuta, W. Kanai, K. Kashiwagi, I. Hijikata and H. Nakane, *December, p. 993*

Design of a Positive Resist for Projection Lithography in the Mid-UV, G. Willson, R. Miller, D. McKean, N. Clecak, T. Tompkins, D. Hofer, J. Michl and J. Downing, *December, p. 1004*

Chemical Amplification in the Design of Dry Developing Resist Materials, H. Ito and C. G. Willson, *December, p. 1012*

Ultrafast Deep UV Lithography Using Excimer Lasers, K. Jain, S. Rice, and B. J. Lin, *December, p. 1019*

Deep UV Photolithographic Systems and Processes, C. W. Wilkins, Jr., E. Reichmanis, E. A. Chandross and R. L. Hartless, *December, p. 1025*

Materials for Multilevel Resist Schemes, E. Reichmanis, C. W. Wilkins, Jr., and E. Ong, *December, p. 1039*

A New Negative Working Resist for UV Light Lithography, H. Nakane, A. Yokota, S. Yamamoto and W. Kanai, *December, p. 1050*

173. Physical Properties

Laminar Mixing of Polymeric Liquids; A Brief Review and Recent Theoretical Developments, J. M. Ottino and R. Chella, *May, p. 357*

Rebound Test to Measure The Strength of Polymeric Materials, T. Casiraghi, *November, p. 902*

174. Pipe

Plane Strain Fracture Toughness of Polyethylene Pipe Materials, J. F. Mandell, D. R. Roberts and F. J. McGarry, *May, p. 404*

175. Poly(acrylonitrile)

Zero Migration of Monomers in Glassy Polymers: A Possible Artifact of Ther-

mal Depolymerization, J. L. Osborne, G. C. Sarti, W. J. Koros, and H. B. Hopfenberg, *June, p. 473*

The Dual-Mode Solution and Transport of Water in Poly(acrylonitrile), G. R. Mauze and S. A. Stern, *July, p. 548*

176. Polyamic Acid

Viscoelastic Properties of Polyamic Acid Solutions—Precursors of Polyimides, S. A. Jenekhe, *September, p. 713*

177. Polybutadiene

Thermal Aging Study of Carboxyl-Terminated Polybutadiene and Poly(Butadiene-Acrylonitrile)-Reactive Liquid Polymers, Y. Okamoto, *March, p. 222*

Low-Energy Solvent Separation Method, T. G. Gutowski, N. P. Suh, C. Cangialose, and G. M. Berube, *March, p. 230*

178. Poly (butadiene acrylonitrile)

Thermal Aging Study of Carboxyl-Terminated Polybutadiene and Poly(Butadiene-Acrylonitrile)-Reactive Liquid Polymers, Y. Okamoto, *March, p. 222*

179. Poly(butylacrylate)

A Survey of Dual Phase Continuity and Miscibility in Interpenentrating Polymer Networks, Making Use of Selective Decrosslinking and Dissolution of One Component: Poly(n-Butyl Acrylate)/-Polystyrene, L. H. Sperling, and J. M. Widmaier, *August, p. 693*

180. Poly(caprolactone)

On the Application of Fourier Transform Infrared Spectroscopy to the Elucidation of Specific Interactions in Miscible Polyester-Poly(vinyl chloride) Blends, D. F. Varnell, E. J. Moskala, P. C. Painter, and M. M. Coleman, *August, p. 658*

Competitive Equilibria in Miscible Polymer Blends and Low Molecular Weight Analogues: A Fourier Transform Infrared Study, A. Garton, *August, p. 663*

181. Polycarbonate

Prediction of Strain Recovery During Solid-Phase Forming of Thermoplastics, R. K. Okine and N. P. Suh, *Mid-February, p. 61*

Analysis of the Puncture of a Bisphenol-A Polycarbonate Disc, R. P. Nimmer, *February, p. 155*

Studies on Whitening Phenomena Induced by Some Non-Solvents on Highly Oriented Glassy Polymers, N. H. Sung, R. E. Gahan and R. E. Haven, *April, p. 328*

Dynamic Mechanical and Thermomechanical Properties of Silicone-Polycarbonate Block Copolymers, W. Maung, K. M. Chua, T. H. Ng, and H. L. Williams, *Mid-June, p. 439*

The Hydrolytic Stability of Glass Fiber Reinforced Poly(butylene terephthalate), Poly(ethylene terephthalate) and Polycarbonate, P. G. Kelleher, R. P. Wentz, and M. Y. Hellman, and E. H. Gilbert, *July, p. 537*

The Influence of Knit-Lines on the Tensile Properties of Injection Molded Parts, R. M. Criens and H. G. Mosle, *July, p. 591*

Fracture Toughness of a Short-Fiber Reinforced Thermoplastic, W. E. Haskell, III, S. P. Petrie, and R. W. Lewis, *Mid-October, p. 771*

182. Polyesters

The Hydrolytic Stability of Glass Fiber Reinforced Poly(butylene terephthalate), Poly(ethylene terephthalate) and Polycarbonate, P. G. Kelleher, R. P. Wentz, M. Y. Hellman, and E. H. Gilbert, *July, p. 537*

Vibrational Spectroscopic Characterization of Rigid Rod Polymers: IV. Crystalline Modifications of Poly(p-phenylene terepthalamide), D. Y. Shen, S. E. Molis, and S. L. Hsu, *July, p. 543*

Engineering and Molding Properties of Poly(Vinyl Chloride), Acrylonitrile-Butadiene-Styrene and Polyester Blends, S. K. Khanna and W. I. Congdon, *Mid-August, p. 627*

A Comparison of Miscible Binary Blend Interaction Parameters Measured by Different Methods, J. E. Harris, D. R. Paul, and J. W. Barlow, *August, p. 676*

Poly(Butyleneterephthalate)-Ethylenevinylacetate Polymer Blends, F. Pilati, *September, p. 750*

183. Polyethylene

Isothermal and Nonisothermal Crystallization of Polyethylene, M. R. Kamal and E. Chu, *January, p. 27*

Effects of Shearing Conditions on Crystalline Orientation and Relaxation in Polyethylene, E. S. Hsiue, R. E. Robertson, and G. S. Y. Yeh, *Mid-February, p. 74*

Rheological Behavior of Highly Filled Polymer Melts, D. M. Bigg, *March, p. 206*

Plane Strain Fracture Toughness of Polyethylene Pipe Materials, J. F. Mandell, D. R. Roberts, and F. J. McGarry, *May, p. 404*

Shear Modification of Polymers, A. Rudin and H. P. Schreiber, *Mid-June, p. 422*

Heat Transfer and Microstructure in Extrusion Blowmolding, M. R. Kamal and D. Kalyon, *June, p. 503*

Annealing of Ultra-Oriented High Density Polyethylene Extrudates, A. Tsuruta, T. Kanamoto, K. Tanaka, and R. Porter, *June, p. 521*

The Stability of Blends of Incompatible Thermoplastics, B. Maxwell, and G. L. Jasso, *Mid-August, p. 614*

A Novel Technique for Measuring the Impact Properties of a Tough Polyethylene, R. W. Truss, R. A. Duckett, and I. M. Ward, *September, p. 708*

Diffusion of Ethyl Acetate Vapor in Strained Low Density Polyethylene, J. C. Phillips and A. Peterlin, *September, p. 734*

High Modulus/High Strength Polyethylene Obtained by High-Pressure Injection Molding, J. Kubat and J.-A. Manson, *November, p. 869*

Influence of Mold Design on the Mechanical Properties of High-Pressure Injection-Molded Polyethylene, J. Kurat, J.-A. Manson, and M. Rigdahl, *November, p. 877*

Thermal, Mechanical, and Rheological Behavior of Blends of Ultrahigh and Normal-Molecular-Weight Linear Polyethylenes, S. K. Bhateja and E. H. Andrews, *November, p. 888*

184. Poly(ethylene terephthalate)

A Study of Structural Development in the High Speed Spinning of Poly(Ethylene Terephthalate), H. H. George, A. Holt, and A. Buckley, *Mid-February, p. 95*

The Rate of Crystallization of Poly(Ethylene Terephthalate) by Differential Scanning Calorimetry, C. C. Lin, *February, p. 113*

Mechanical Properties of Injection Molded Blends of Poly(Ethylene-Terephthalate) and Poly(Amide-6,6), M. R. Kamal, M. A. Sahto, and L. A. Utracki, *Mid-August, p. 637*

Poly(Butyleneterephthalate)-Ethylenevinylacaetate Polymer Blends, F. Pilati, *September, p. 750*

Blowing of Oriented PET Bottles: Predictions of Free Blow Size and Shape, L. Erwin, M. A. Pollock, and H. Gonzalez, *October, p. 826*

185. Poly(ethylene-vinyl acetate)

Physical Properties of High-Pressure Ethylene Vinylacetate Copolymers and Their Saponified Derivatives, R. J. Koopmans, R. Van Der Linden, and E. F. Vansant, *April, p. 306*

186. Polyimides

Viscoelastic Properties of Polyamic Acid Solutions—Precursors of Polyimides, S. A. Jenekhe, *September, p. 713*

The Rheology and Spin Coating of Polyimide Solutions, S. A. Jenekhe, *October, p. 830*

187. Polyisobutylene

Head-to-Head Polymers 27: Thermal Degradation of Head-to-Head Polyisobutylene, M. Malanga, F. Xi, and O. Vogl, *March, p. 226*

Properties of Polyisobutylene-Polyurethane Block Copolymers: I. Macroglycols from Ozonolysis of Isobutylene-Isoprene Copolymer, T. A. Speckhard, G. Ver Strate, P. E. Gibson, and S. L. Cooper, *April, p 337*

Head to Head Polymers. XXV: Properties of Head to Head Polyisobutylene, M. Malanga and O. Vogl, *July, p. 597*

188. Polymerization

Predicting Conversion Using Temperature as the Measured Variable for the RIM Process. Part I: Simulation and Measurement Structure, J. A. Romagnoli and J. Castro, *Mid-February, p. 105*

Characterizing Photoresists by Thermal Analysis, B. K. Appelt, *February, p. 125*

Thermokinetic Modeling of an Epoxy Resin I. Chemoviscosity, Y. A. Tajima and D. Crozier, *March, p. 186*

Viscoelastic Properties of Polyamic Acid Solutions—Precursors of Polyimides, S. A. Jenekhe, *September, p. 713*

The Flow of a Polymerizing Liquid in a Cylindrical Pipe, A. Y. Malkin, L. I. Sherysheva, S. G. Kulichikhin, and P. V. Zhirkov, *October, p. 804*

Possibilities for Photoimaging Using Onium Salts, J. V. Crivello, *Mid-December, p. 953*

Effect of Varying the Composition of Copolymers of Glycidyl Methacrylate and 3-Chlorostyrene (GMC) on Electron Lithographic Performance, A. E. Novembre and M. J. Bowden, *Mid-December, p. 975*

Electron Beam Lithography of Copolymeric Resists Containing Styrenes and Allyl Acrylates, J. Shu, W. Lee, L. Venable and G. Varnell, *Mid-December, p. 980*

Ketocoumarins as Photosensitizers and Photoinitiators, J. L. R. Williams, D. P. Specht and S. Farid, *December, p. 1022*

A Breakthrough to the Plasma Deposited Dry-Developable E-Beam Resist, S. Hattori, S. Morita, M. Yamada, J. Tamano and M. Ieda, *December, p. 1043*

Poly(4-chlorostyrene), A New High Contrast Negative E-Beam Resist, J. Liutkus, M. Hatzakis, J. Shaw, and J. Paraszczak, *December, p. 1047*

189. Polymethacrylate Copolymers

Evaluation of Poly(Allyl Methacrylate)-co-(Hydroxyethyl Methacrylate) as Negative Electron-Beam Resist, Z. C. H. Tan and S. S. Georgia, *Mid-December, p. 963*

Poly(methyl α-Trifluoromethylacrylate) as a Positive Electron Beam Resist, C. G. Willson, H. Ito, D. C. Miller and T. G. Tessier, *December, p. 1000*

190. Poly(methyl isopropenyl ketone)

Recent Resist Developments in Japan, —A Review, S. Nonogaki, *December, p. 985*

Plasma Developable Photoresist Containing Electronic Excitation Energy Quenching System, M. Tsuda, S. Oikawa, A. Yokota, M. Yabuta, W. Kanai, K. Kashiwagi, I. Hijikata and H. Nakane, *December, p. 993*

A New Negative Working Resist for UV Light Lithography, H. Nakane, A. Yokota, S. Yamamoto and W. Kanai, *December, p. 1050*

191. Poly (methyl methacrylate)

Residual Stress Craze and Crack Formation in Poly(Methyl Methacryate) L. Bevan and H. Nugent, *March, p. 211*

Orientation Development in the Injection Molding of Amorphous Polymers, A. I. Isayev, *Mid-April, p. 271*

Studies of Whitening Phenomena Induced by Some Non-Solvents on Highly Oriented Glassy Polymers, N. H. Sung, R. E. Gahan, and R. E. Haven, *April, p. 328*

Polyurethane-Poly(Methyl Methacrylate) Interpenetrating Polymer Networks: Some Mechanical Properties, A. Morin, H. Djomo, and G. C. Meyer, *May, p. 394*

The Stability of Blends of Incompatible Thermoplastics, B. Maxwell and G. L. Jasso, *Mid-August, p. 614*

Effect of Molecular Weight on Rate of Enthalpy Relaxation of Poly (Methyl Methacrylate) and Its Oligomers, H. Yoshida and Y. Kobayashi, *November, p. 907*

192. Polynorbornene

Characteristics of Polynorbornene and Ethylene-Propylene Terpolymer Blends, C. S. Wang, *June, p. 530*

193. Polyolefins

Tensile Yield in Poly(4-Methyl Pentene-1), B. Hartman and R. F. Cole, Jr., *January, p. 13*

Notch Sensitivity and Fractography of Polyolefins, R. D. Goolsby and A. M. Chatterjee, *February, p. 117*

Aspects of Dispersion and Flow in Thermoplastic-Elastomer Blends, H. P. Schreiber and A. Olguin, *February, p. 129*

Effect of the Addition of EPM Copolymers on the Properties of High Density Polyethylene/Isotactic Polypropylene Blends: II. Morphology and Mechanical Properties of Extruded Samples, L. D'Orazio, R. Greco, E. Martuscelli, and G. Ragosta, *June, p. 489*

Characteristics of Polynorbornene and Ethylene-Propylene Terpolymer Blends, C. S. Wang, *June, p. 530*

Elongation Rheology of Polyolefins and Its Relation to Processability, D. H. Sebastian and J. R. Dearborn, *July, p. 572*

Fourier Transform Infrared Studies of Poly (Vinyl Chloride) Blends with Ethylene Co- and Terpolymers, M. Iskandar, C. Tran, L. M. Robeson, and J. E. McGrath, *August, p. 682*

194. Polyoxymethylene

The Influence of Knit-Lines on the Tensile Properties of Injection Molded Parts, R. M. Criens and H. G. Mosle, *July, p. 591*

Elastic Moduli of Highly Oriented Polyoxymethylene, C. L. Choy, W. P. Leung, and C. W. Huang, *November, p. 910*

195. Polyphenylene Oxide

NMR Characterization of Intermolecular Interactions for Polymers, IV. Intermolecular Interactions of Low Molecular Weight Analogues for Compatible Blends of Polystyrene and Poly(2,6-Dimethyl-1,4-Phenylene Oxide), M. B. Djordjevic and R. S. Porter, *August, p. 650*

196. Polypropylene

Filling Thin Cavities of Variable Gap Thickness: A Numerical and Experimental Investigation, C. A. Hieber, L. S. Socha, S. F. Shen, K. K. Wang, and A. I. Isayev, *January, p. 20*

Structure-Properties Relationships in Biaxially Oriented Polypropylene Films, A. J. De Vries, *Mid-April, p. 241*

New Techniques for the Characterization of Orientation in Semicrystalline Polymer Moldings, R. J. Samuels, *Mid-April, p. 257*

Chemiluminescence Studies of the Degradation and Stabilization of Polymers, G. A. George, G. T. Egglestone, and S. Z. Riddell, *May, p. 412*

Extrusion and Melt Spinning Characteristics of Thermally Degraded Polypropylene, H. Yamane and J. L. White, *June, p. 516*

Factors Affecting the Mechanical Properties of Mica-Filled Polypropylenes, C. Busigin, G. M. Martinez, R. T. Woodhams, and R. Lahtinen, *Mid-October, p. 766*

Properties of Phenolic Fiber-Reinforced Polymers, L. J. Broutman, *Mid-October, p. 776*

Effect of Morphology on Stress Relaxation of Polypropylene, G. Attalla, I. B. Guanella, and R. E. Cohen, *November, p. 883*

197. Polysiloxanes

Organosilicon Polymers for Lithographic Applications, J. M. Shaw, M. Hatzakis, J. Paraszczak, J. Liutkus, E. Babich, *December, p. 1054*

198. Polystyrene

Filling Thin Cavities of Variable Gap Thickness: A Numerical and Experimental Investigation, C. A. Hieber, L. S. Socha, S. F. Shen, K. K. Wang, and A. I. Isayev, *January, p. 20*

Prediction of Strain Recovery During Solid-Phase Forming of Thermoplastics, R. K. Okine and N. P. Suh, *Mid-February, p. 61*

Aspects of Dispersion and Flow in Thermoplastic-Elastomer Blends, H. P. Schreiber and A. Olguin, *February, p. 129*

Orientation Development in the Injection Molding of Amorphous Polymers, A. I. Isayev, *Mid-April, p. 271*

Physical Aging in Polystyrene: Comparison of the Changes in Creep Behavior with the Enthalpy Relaxation, R-J. Roe and G. M. Millman, *April, p. 318*

Process Control of Injection Molding, B. Sanschagrin, *Mid-June, p. 421*

Zero Migration of Monomers in Glassy Polymers: A Possible Artifact of Thermal Depolymerization, J. L. Osborne, G. C. Sarti, W. J. Koros, and H. B. Hopfenberg, *June, p. 473*

Influence of Mineral Oils on Polystyrene Fracture, E. Paredes, A. Bustamante, and L. Rivas, *June, p. 498*

The Influence of Knit-Lines on the Tensile Properties of Injection Molded Parts, R. M. Criens and H. G. Mosle, *July, p. 591*

NMR Characterization of Intermolecular Interactions for Polymers, IV. Intermolecular Interactions of Low Molecular Weight Analogues for Compatible Blends of Polystyrene and Poly(2,6-Dimethyl-1,4-Phenylene Oxide), M. B. Djordjevic and R. S. Porter, *August, p. 650*

A Survey of Dual Phase Continuity and Miscibility in Interpenetrating Poly-

mer Networks, Making Use of Selective Decrosslinking and Dissolution of One Component: Poly (n-Butyl Acrylate)/-Polystyrene, L. H. Sperling and J. M. Widmaier, *August, p. 693*

Heating and Bonding Mechanisms in Ultrasonic Welding of Thermoplastics, M. N. Tolunay, P. R. Dawson, and K. K. W&ng, *September, p. 726*

Thermal and Rheological Properties of Blends of Polystyrene and Thermotropic Liquid Crystals, W. Huh, R. A. Weiss, and L. Nicolais, *Mid-October, p. 779*

Blending of Polystyrene With Styrene-Siloxane Block and Graft Copolymers, P. Bajaj, D. C. Gupta, and S. K. Varshney, *October, p. 820*

Submicron Patterns in Substituted Polystyrene Resists by Focused-Ion-Beam Lithography, R. G. Brault, R. L. Kubena and J. E. Jensen, *Mid-December, p. 941*

199. Polysulfones

X-Ray Photochemistry: ω-Chloro Olefin Sulfones, M. Kaplan, *Mid-December, p. 957*

200. Polyurethanes

Some Mechanical Properties of Rigid Polyurethane Structural Foam, J. M. Lifshitz, *February, p. 144*

Properties of Polyisobutylene-Polyurethane Block Copolymers: I. Macroglycols from Ozonolysis of Isobutylene-Isoprene Copolymer, T. A. Speckhard, G. Ver Strate, P. E. Gibson, and S. L. Cooper, *April, p. 337*

Polyurethane-Poly(Methyl Methacrylate) Interpenetrating Polymer Networks. Some Mechanical Properties, A. Morin, H. Djomo, and G. C. Meyer, *May, p. 394*

Failure of Rubber-Modified Plastic Liners, Y. W. Mai, *July, p. 560*

Characterization of Fast-Cure Resins for Reaction Injection Molding, J. S. Osinski, *September, p. 756*

Effect of a Diamine Additive on the Structure-Property Relationships of RIM Polyurethane Elastomers, J. Blackwell, J. Quay, and R. B. Turner, *October, p. 816*

201. Poly (vinyl chloride)

Dynamic Mechanical Studies of Thermal Aging in Poly (Vinyl Chloride), E. J. Roche, *May, p. 390*

Zero Migration of Monomers in Glassy Polymers: A Possible Artifact of Thermal Depolymerization, J. L. Osborne, G. C. Sarti, W. J. Koros, and H. B. Hopfenberg, *June, p. 473*

Engineering and Molding Properties of Poly(Vinyl Chloride), Acrylonitrile-Butadiene-Styrene and Polyester Blends, S. K. Khanna and W. I. Congdon, *Mid-August, p. 627*

On The Application of Fourier Transform Infrared Spectroscopy to the Elucidation of Specific Interactions in Miscible Polyester-Poly(vinyl Chloride) Blends, D. F. Varnell, E. J. Moskala, P. C. Painter, and M. M. Coleman, *August, p. 658*

Fourier Transform Infrared Studies of Poly (Vinyl Chloride) Blends with Ethylene Co- and Terpolymers, M. Iskandar, C. Tran, L. M. Robeson, and J. E. McGrath, *August, p. 682*

202. Poly (vinlyidene fluoride)

Stress Corrosion Cracking of Poly-(Vinylidene Fluoride) in Sodium Hydroxide, S. V. Hoa and P. Ouellette, *March, p. 202*

203. Poly (vinyl phenol)

Azide-Phenolic Resin UV Resist (MRL) for Microlithography, T. Iwayangi, M. Hashimoto, S. Nonogaki, S. Koibuchi and D. Makino, *Mid-December, p. 935*

Recent Resist Developments in Japan—A Review, S. Nonogaki, *December, p. 985*

204. Post-curing

Post-Curing of Dental Restorative Resin, W. Wu and B. M. Fanconi, *September, p. 704*

205. Pressure Dependence

Pressure Dependence of Newtonian Viscosity, L. A. Utracki, *Mid-June, p. 446*

206. Process Control

Process Control of Injection Molding, B. Sanschagrin, *Mid-June, p. 431*

Predicting Conversion in the Reaction Injection Molding Process. Using Temperature as the Measured Variable Part II: Implementation of the On-Line Corrective Algorithm, O. Del Pino, J. A. Romagnoli, and J. M. Castro, *November, p. 895*

207. Protonation

Effects of Protonation on the Conformational Characteristics and Geometry of the Rod-like Benzobisoxazole Polymers, W.J. Welsh and J. E. Mark, *February, p. 140*

208. Proximity Printing

Proximity Printing of Chrome Masks, D. Meyerhofer and J. Mitchell, *December, p. 990*

R

209. Reaction Injection Molding

Predicting Conversion Using Temperature as the Measured Variable for the RIM Process. Part I: Simulation and Measurement Structure, J. A. Romagnoli and J. Castro, *Mid-February, p. 105*

Distribution of Striation Thickness from Impingement Mixers in Reaction Injection Molding, J. Baldyga and J. R. Bourne, *July, p. 556*

Moldability Studies in Reactive Polymer Processing, L. T. Manzione and J. S. Osinski, *July, p. 576*

Characterization of Fast-Cure Resins for Reaction Injection Molding, J. S. Osinski, *September, p. 756*

Effect of a Diamine Additive on the Structure-Property Relationships of RIM Polyurethane Elastomers, J. Blackwell, J. Quay, and R. B. Turner, *October, p. 816*

Predicting Conversion in the Reaction Injection Molding Process. Using Temperature as the Measured Variable Part II: Implementation of the On-Line Corrective Algorithm, O. Del Pino, J. A. Romagnoli, and J. M. Castro, *November, p. 895*

210. Rebound Test

Rebound Test to Measure The Strength of Polymeric Materials, T. Casiraghi, *November, p. 902*

211. Reinforced Plastics

A Model of Compression Mold Filling, C. L. Tucker, III, and F. Folgar, *Mid-February, p. 69*

The Hydrolytic Stability of Glass Fiber Reinforced Poly(butylene terephthalate), Poly(ethylene terephthalate) and Polycarbonate, P. G. Kelleher, R. P. Wentz, M. Y. Hellman, and E. H. Gilbert, *July, p. 537*

Fiber Fracture in Reinforced Thermoplastic Processing, R. Von Turkovich and L. Erwin, *September, p. 743*

Factors Affecting the Mechanical Properties of Mica-Filled Polypropylenes, C. Busigin, G. M. Martinez, R. T. Woodhams, and R. Lahtinen, *Mid-October, p. 766*

Properties of Phenolic Fiber-Reinforced Polymers, L. J. Broutman, *Mid-October, p. 776*

Fracture Toughness of a Short-Fiber Reinforced Thermpolastic, W. E. Haskell, III, S. P. Petrie, and R. W. Lewis, *Mid-October, p. 771*

212. Relaxation Time

Viscoelastic Behavior of Amorphous Polymers in the Glass-Rubber Transition Region: Birefringence Studies, B. E. Read, *October, p. 835*

Effect of Molecular Weight on Rate of Enthalpy Relaxation of Poly (Methyl Methacrylate) and Its Oligomers, H. Yoshida and Y. Kobayashi, *November, p. 907*

213. Reorientation

Stress Corrosion Cracking of Poly-(Vinylidene Fluoride) in Sodium Hydroxide, S. V. Hoa and P. Ouellette, *March, p. 202*

214. Residence Time Distribution

Residence Time Distribution of Polymer Melts in the Linearly Tapered Coat-Hanger Die, Y. Matsubara, *January, p. 17*

215. Resistivity

Electron Transport Processes in Conductor-Filled Polymers, R. D. Sherman, L. M. MIddleman, and S. M. Jacobs, *January, p. 36*

Effects of Axial Stretching on the Resistivity of Carbon Black Filled Silicone Rubber, J. Kost, M. Narkis, and A. Foux, *July, p. 567*

216. Resist Processing

Evaluation of the Influence of Process Factors on Plasma Developed X-Ray Re-

sist Properties, G. N. Taylor, M. Y. Hellman, M. D. Feather and W. E. Willenbrock, *December, p. 1029*

Materials for Multilevel Resist Schemes, E. Reichmanis, C. W. Wilkins, Jr. and E. Ong, *December, p. 1039*

217. Resist Profiles

Profile Modification of Resist Patterns in Optical Lithography, F. A. Vollenbroek, E. J. Spiertz and H. J. J. Kroon, *Mid-December, p. 925*

218. Resolution

Submicron Patterns in Substituted Polystyrene Resists by Focused-Ion-Beam Lithography, R. G. Brault, R. L. Kubena and J. E. Jensen, *Mid-December, p. 941*

Evaluation of Poly(Allyl Methacrylate)-co-(Hydroxyethyl Methacrylate) as Negative Electron-Beam Resist, Z. C. H. Tan and S. S. Georgia, *Mid-December, p. 963*

Deep UV/Photolithographic Systems and Processes, C. W. Wilkins, Jr., E. Reichmanis, E. A. Chandross and R. L. Hartless, *December, p. 1025*

Evaluation of the Influence of Process Factors on Plasma Developed X-Ray Resist Properties, G. N. Taylor, M. Y. Hellman, M. D. Feather and W. E. Willenbrock, *December, p. 1029*

Materials for Multilevel Resist Schemes, E. Reichmanis, C. W. Wilkins, Jr. and E. Ong, *December, p. 1039*

A New Negative Working Resist for UV Light Lithography, H. Nakane, A. Yokota, S. Yamamoto, and W. Kanai, *December, p. 1050*

Organosilicon Polymers for Lithographic Applications, J. M. Shaw, M. Hatzakis, J. Paraszczak, J. Liutkus, E. Babich, *December, p. 1054*

219. Rheological Properties

Melt Viscosity Behavior of Some Engineering Thermoplastics, R. A. Mendelson, *Mid-February, p. 79*

Aspects of Dispersion and Flow in Thermoplastic-Elastomer Blends, H. P. Schreiber and A. Olguin, *February, p. 129*

Rheological Behavior of Highly Filled Polymer Melts, D. M. Bigg, *March, p. 206*

Orientation Development in Thermotropic Liquid Crystal Polymers, Y. Ide and Z. Ophir, *Mid-April, p. 261*

Relationship Between Polymerization Conditions and Rheological Properties for Styrene-Acrylonitrile Copolymers, A. Garcia-Rejon, C. Rangel-Nafaile, L. Rios, and F. Cid, *Mid-June, p. 452*

Highly Elastic-Constant Viscosity Fluids, L. Choplin, P. J. Carreau, and A. Ait Kadi, *Mid-June, p. 459*

Steady-Shear Rheological Behavior of the Suspension of Spherical Particles in a Second-Order Fluid, P. N. Kaloni and V. Stastna, *Mid-June, p. 465*

Effect of the Addition of EPM Copolymers on the Properties of High Density Polyethylene/Isotactic Polypropylene Blends: II. Morphology and Mechanical Properties of Extruded Samples, L. D'Orazio, R. Greco, E. Martuscelli, and G. Ragosta, *June, p. 489*

Extrusion and Melt Spinning Characteristics of Thermally Degraded Polypropylene, H. Yamane and J. L. White, *June, p. 516*

Melt Flow of Polymer Blends, L. A. Utracki, *Mid-August, p. 602*

Engineering and Molding Properties of Poly(Vinyl Chloride), Acrylonitrile-Butadiene-Styrene and Polyester Blends, S. K. Khanna and W. I. Congdon, *Mid-August, p. 627*

Sandwich Injection Molding of Thermotropic Copolyesters and Filled Polyester, D. G. Baird and G. L. Wilkes, *Mid-August, p. 632*

Viscoelastic Properties of Polyamic Acid Solutions—Precursors of Polyimides, S. A. Jenekhe, *September, p. 713*

Thermal and Rheological Properties of Blends of Polystyrene and Thermotropic Liquid Crystals, W. Huh, R. A. Weiss, and L. Nicolais, *Mid-October, p. 779*

The Rheology and Spin Coating of Polyimide Solutions, S. A. Jenekhe, *October, p. 830*

220. Rheology

Shear Modification of Polymers, A. Rudin and H. P. Schreiber, *Mid-June, p. 422*

Elongation Rheology of Polyolefins and its Relation to Processability, D. H. Sebastian and J. R. Dearborn, *July, p. 572*

A Phenomenological Master Curve for Viscosity—Structure Data for Two Phase Polymer Systems in Simple Shear Flow, J. Lyngaae-Jorgensen, *Mid-August, p. 610*

Melt Rheology of Polymer Blends the Morphology Feedback, A. P. Plochocki, *Mid-August, p. 618*

221. Rubber

Aspects of Dispersion and Flow in Thermoplastic-Elastomer Blends, H. P. Schreiber and A. Olguin, *February, p. 129*

Vulcanization Shrinkage of Rubber Articles with Rigid Armoring Parts, L. I. Tukachinski, *April, p. 350*

S

222. Sandwich Injection Molding

Sandwich Injection Molding of Thermotropic Copolyesters and Filled Polyester, D. G. Baird and G. L. Wilkes, *Mid-August, p. 632*

223. Sandwich Samples

A Novel Technique for Measuring the Impact Properties of a Tough Polyethylene, R. W. Truss, R. A. Duckett, and I. M. Ward, *September, p. 708*

224. Screw Design

Mathematical Modeling of Melting of Polymers in Barrier-Screw Extruders, B. Elbirli, J. T. Lindt, S. R. Gottgetreu, and S. M. Baba, *Mid-February, p. 86*

Shear Stress at Polymer/Metal Interface During Melting in Extrusion, D. E. McClelland and C. I. Chung, *Mid-February, p. 100*

Design of Two-Stage Extractor Screws, P. H. Squires, *April, p. 299*

225. Shear

Effects of Shearing Conditions on Crystalline Orientation and Relaxation in Polyethylene, E. S. Hsiue, R. E. Robertson, G. S. Y. Yeh, *Mid-February, p. 74*

Shear Stress at Polymer/Metal Interface During Melting in Extrusion, D. E. McClelland and C. I. Chung, *Mid-February, p. 100*

Shear Modification of Polymers, A. Rudin and H. P. Schreiber, *Mid-June, p. 422*

Highly Elastic-Constant Viscosity Fluids, L. Choplin, P. J. Carreau, and A. Ait Kadi, *Mid-June, p. 459*

226. Shear Flow

Flow Instabilities of Epoxide Prepolymers, J. V. Aleman, *March, p. 177*

Steady-Shear Rheological Behavior of the Suspension of Spherical Particles in a Second-Order Fluid, P. N. Kaloni and V. Stastna, *Mid-June, p. 465*

Viscoelastic Properties of Polyamic Acid Solutions—Precursors of Polyimides, S. A. Jenekhe, *September, p. 713*

227. Shear Heating

Aspects of Dispersion and Flow in Thermoplastic-Elastomer Blends, H. P. Schreiber and A. Olguin, *February, p. 129*

228. Shear Rate

Viscosity Behavior of Some Engineering Thermoplastics, R. A. Mendelson, *Mid-February, p. 79*

Shear Stress at Polymer/Metal Interface During Melting in Extrusion, D. E. McClelland and C. I. Chung, *Mid-February, p. 100*

229. Shrinkage

Vulcanization Shrinkage of Rubber Articles with Rigid Armoring Parts, L. I. Tukachinski, *April, p. 350*

230. Silicone Rubber

Effects of Axial Stretching on the Resistivity of Carbon Black Filled Silicone Rubber, J. Kost, M. Narkis, and A. Foux, *July, p. 567*

231. Sintering

Newtonian Sintering Simulator of Two Spherical Particles, N. Rosenzweig and M. Narkis, *January, p. 32*

232. Solubility

Equilibrium Solubility and Permeability of Sulfur Dioxide in Epoxy Resin of Aliphatic Diglycidyl Ether, G. R. Ranade, V. M. Nadgir, C. A. Plank, and W. L. S. Laukhuf, *January, p. 6*

The Dual-Mode Solution and Transport of Water in Poly(acrylonitrile), G. R. Mauze and S. A. Stern, *July, p. 548*

Hydrogen Bonding Potential, HBP: A Model for Predicting Resin Solubilities

in Organic Solvents, P. E. Rider, *October, p. 810*

233. Solvent Effects

Influence of External Environments on Fatigue Crack Growth in Epoxy Resin, K. Mizutani and T. Iwatsu, *March, p. 183*

A Low-Energy Solvent Separation Method, T. G. Gutowski, N. P. Suh, C. Cangialose, and G. M. Berube, *March, p. 230*

Investigation of the Solvent Evaporation Effect on Spin Coating of Thin Films, B. T. Chen, *May, p. 399*

Competitive Equilibria in Miscible Polymer Blends and Low Molecular Weight Analogues: A Fourier Transform Infrared Study, A. Garton, *August, p. 663*

234. Sorption

Equilibrium Solubility and Permeability of Sulfur Dioxide in Epoxy Resin of Aliphatic Diglycidyl Ether, G. R. Ranade, V. M. Nadgir, C. A. Plank, and W. L. S. Laukhuf, *January, p. 6*

A Comparison of Miscible Binary Blend Interaction Parameters Measured by Different Methods, J. E. Harris, D. R. Paul, and J. W. Barlow, *August, p. 676*

Diffusion of Ethyl Acetate Vapor in Strained Low Density Polyethylene, J. C. Phillips and A. Peterlin, *September, p. 734*

235. Spin Coating

Investigation of the Solvent Evaporation Effect on Spin Coating of Thin Films, B. T. Chen, *May, p. 399*

The Rheology and Spin Coating of Polyimide Solutions, S. A. Jenekhe, *October, p. 830*

236. Stiffness

Parameter Design Model for Corrugated Tubing, H. L Krein, *Mid-April, p. 285*

237. Strain Energy Release Rate

A Novel Technique for Measuring the Impact Properties of a Tough Polyethylene, R. W. Truss, R. A. Duckett, and I. M. Ward, *September, p. 708*

238. Strain Recovery

Prediction of Strain Recovery During Solid-Phase Forming of Thermpolastics, R. K. Okine and N. P. Suh, *Mid-February, p. 61*

Diffusion of Ethyl Acetate Vapor in Strained Low Density Polyethylene, J. C. Phillips and A. Peterlin, *September, p. 734*

239. Stress

A Study of Structural Development in the High Speed Spinning of Poly(Ethylene Terephthalate), H. H. George, A. Holt, and A. Buckley, *Mid-February, p. 95*

Analytical Melting Model for Extrusion: Stress of Fully Compacted Solid Polymers, K. H. Chung and C. I. Chung, *March, p. 191*

240. Stress Cracking

Stress Corrosion Cracking of Poly(Vinylidene Fluoride) in Sodium Hydroxide, S. V. Hoa and P. Ouellette, *March, p. 202*

Residual Stress Craze and Crack Formation in Poly(Methyl Methacrylate), L. Bevan and H. Nugent, *March, p. 211*

241. Stress Distribution

The Specification of Orientation and its Development in Polymer Processing, J. L. White and J. E. Spruiell, *Mid-April, p. 247*

Orientation Development in the Injection Molding of Amorphous Polymers, A. I. Isayev, *Mid-April, p. 271*

242. Stress Relaxation

Prediction of Strain Recovery During Solid-Phase Forming of Thermoplastics, R. K. Okine and N. P. Suh, *Mid-February, p. 61*

Solvent-Crazing Criteria, D. C. Wright and K. V. Gotham, *February, p. 135*

Dynamic Mechanical and Thermomechanical Properties of Silicone-Polycarbonate Block Copolymers, W. Maung, K. M. Chua, T. H. Ng, and H. L. Williams, *Mid-June, p. 439*

Characterization of Electron Beam Crosslinked Poly(styrene-block-ethylene-co-butylene-block-styrene), D. E. Zurawski and L. H. Sperling, *June, p. 510*

Stress-Relaxation Crazing of Polymers—An Energy Criterion, O. S. Brueller, *October, p. 844*

Effect of Morphology on Stress Relaxation of Polypropylene, G. Attalla, I. B. Guanella, and R. E. Cohen, *November, p. 883*

243. Stress-Strain

Solvent-Crazing Criteria, D. C. Wright and K. V. Gotham, *February, p. 135*

Analysis of the Puncture of a Bisphenol-A Polycarbonate Disc, R. P. Nimmer, *February, p. 155*

Vulcanization Shrinkage of Rubber Articles with Rigid Armoring Parts, L. I. Tukachinski, *April, p. 350*

Polyurethane-Poly(Methyl Methacrylate) Interpenetrating Polymer Networks: Some Mechanical Properties, A. Morin, H. Djomo, and G. C. Meyer, *May, p. 394*

Effects of Axial Stretching on the Resistivity of Carbon Black Filled Silicone Rubber, J. Kost, M. Narkis, and A. Foux, *July, p. 567*

244. Stretching

Structure-Properties Relationships in Biaxially Oriented Polypropylene Films, A. J. De Vries, *Mid-April, p. 241*

Effects of Axial Stretching on the Resistivity of Carbon Black Filled Silicone Rubber, J. Kost, M. Narkis, and A. Foux, *July, p. 567*

245. Striation Thickness

Distribution of Striation Thickness from Impingement Mixers in Reaction Injection Molding, J. Baldyga and J. R. Bourne, *July, p. 556*

246. Styrene Copolymers

Copolymer Composition as a Function of Molecular Weight for Poly(Stryene-Methyl Methacrylate) Initiated by Ethylaluminum Sesquichloride, R. W. Nunes, S. J. Huang, and J. F. Johnson, *January, p. 1*

Process Control of Injection Molding, B. Sanschagrin, *Mid-June, p. 431*

Relationship Between Polymerization Conditions and Rheological Properties for Styrene-Acrylonitrile Copolymers, A. Garcia-Rejon, C. Rangel-Nafaile, L. Rios, and F. Cid, *Mid-June, p. 452*

Bulk Copolymerization of Styrene-Acrylic Esters: Some Analysis and Design Considerations, K. S. Balaraman, B. D. Kulkarni, and R. A. Mashelkar, *September, p. 719*

Blending of Polystyrene With Styrene-Siloxane Block and Graft Copolymers, P. Bajaj, D. C. Gupta, and S. K. Varshney, *October, p. 820*

A Dry-Etch Resistant Positive-Working Electron Resist, E. D. Roberts, *Mid-December, p. 968*

Effect of Varying the Composition of Copolymers of Glycidyl Methacrylate and 3-Chlorostyrene (GMC) on Electron Lithographic Performance, A. E. Novembre and M. J. Bowden, *Mid-December, p. 975*

Electron Beam Lithography of Copolymeric Resists Containing Styrenes and Allyl Acrylates, J. Shu, W. Lee, L. Venable and G. Varnell, *Mid-December, p. 980*

Poly(4-Chlorostyrene). A New High Negative E-Beam Resist, J. Liutkus, M. Hatzakis, J. Shaw and J. Paraszczak, *December, p. 1047*

247. Surface Dioxide

Equilibrium Solubility and Permeability of Sulfur Dioxide in Epoxy Resin of Aliphatic Diglycidyl Ether, G. R. Ranade, V. M. Nadgir, C. A. Plank, and W. L. S. Laukhuf, *January, p. 6*

248. Surface Tension

Newtonian Sintering Simulator of Two Spherical Particles, N. Rosenzweig and M. Narkis, *January, p. 32*

Aspects of Dispersion and Flow in Thermoplastic-Elastomer Blends, H. P. Schreiber and A. Olguin, *February, p. 129*

249. Suspensions

Steady-Shear Rheological Behavior of the Suspension of Spherical Particles in a Second-Order Fluid, P. N. Kaloni and V. Stastna, *Mid-June, p. 465*

250. Swelling

Characterization of Electron Beam Crosslinked Poly(styrene-block-ethylene-co-butylene-block-styrene), D. E. Zurawski and L. H. Sperling, *June, p. 510*

Extrusion and Melt Spinning Characteristics of Thermally Degraded Polypropylene, H. Yamane and J. L. White, *June, p. 516*

Azide-Phenolic Resin UV Resist (MRL) for Microlithography, T. Iwayangi, M.

Hashimoto, S. Nonogaki, S. Koibuchi and D. Makino, *Mid-December, p. 935*

A New Negative Working Resist for UV Light Lithography, H. Nakane, A. Yokota, S. Yamamoto and W. Kanai, *December, p. 1050*

T

251. *Temperature Dependence*

Tensile Yield in Poly(4-Methyl Pentene-1), B. Hartman, and R. F. Cole, Jr., *January, p. 13*

Isothermal and Nonisothermal Crystallization of Polyethylene, M. R. Kamal and E. Chu, *January, p. 27*

Prediction of Strain Recovery During Solid-Phase Forming of Thermoplastics, R. K. Okine and N. P. Suh, *Mid-February, p. 61*

Effects of Shearing Conditions on Crystalline Orientation and Relaxation in Polyethylene, E. S. Hsiue, R. E. Robertson, and G. S. Y. Yeh, *Mid-February, p. 74*

Melt Viscosity Behavior of Some Engineering Thermoplastics, R. A. Mendelson, *Mid-February, p. 79*

Shear Stress at Polymer/Metal Interface During Melting in Extrusion, D. E. McClelland and C. I. Chung, *Mid-February, p. 100*

Predicting Conversion Using Temperature as the Measured Variable for the RIM Process. Part I: Simulation and Measurement Structure, J. A. Romagnoli and J. Castro, *Mid-February, p. 105*

The Rate of Crystallization of Poly(Ethylene Terephthalate) by Differential Scanning Calorimetry, C. C. Lin, *February, p. 113*

Thermokinetic Modeling of an Epoxy Resin I. Chemoviscosity, Y. A. Tajima and D. Crozier, *March, p. 186*

Analytical Melting Model for Extrusion: Stress of Fully Compacted Solid Polymers, K. H. Chung and C. I. Chung, *March, p. 191.*

The Effect of Storage Temperature on the Mobile Water Content and the Fracture Toughness of a Filled-Polymeric System, R. W. Cahill, *March, p. 197*

Stress Corrosion Cracking of Poly(Vinylidene Fluoride) in Sodium Hydroxide, S. V. Hoa and P. Ouellette, *March, p. 202*

Effects of Strain Rate and Temperature upon Tensile Properties of Acetal Copolymers, K. F. Wissbrun, *March, p. 216*

Thermal Aging Study of Carboxyl-Terminated Polybutadiene and Poly(Butadiene-Acrylonitrile)-Reactive Liquid Polymers, Y. Okamoto, *March, p. 222*

Head-to-Head Polymers 27: Thermal Degradation of Head-to-Head Polyisobutylene, M. Malanga, F. Xi, and O. Vogl, *March, p. 226*

Orientation Development in the Injection Molding of Amorphous Polymers, A. I. Isayev, *Mid-April, p. 271*

Studies on Whitening Phenomena Induced by Some Non-Solvents on Highly Oriented Glassy Polymers, N. H. Sung, R. E. Gahan, and R. E. Haven, *April, p. 328*

An Observation on the Han-Villamizar Critical Pressure Concept in Thermoplastic Foams, J. L. Throne, *April, p. 354*

Plane Strain Fracture Toughness of Polyethylene Pipe Materials, J. F. Mandell, D. R. Roberts, and F. J. McGarry, *May, p. 404*

Pressure Dependence of Newtonian Viscosity, L. A. Utracki, *Mid-June, p. 446*

Relationship Between Polymerization Conditions and Rheological Properties for Styrene-Acrylonitrile Copolymers, A. Garcia-Rejon, C. Rangel-Nafaile, L. Rios, and F. Cid, *Mid-June, p. 452*

Highly Elastic-Constant Viscosity Fluids, L. Choplin, P. J. Carreau, and A. Ait Kadi, *Mid-June, p. 459*

Zero Migration of Monomers in Glassy Polymers: A Possible Artifact of Thermal Depolymerization, J. L. Osborne, G. C. Sarti, W. J. Koros, and H. B. Hopfenberg, *June, p. 473*

Annealing of Ultra-Oriented High Density Polyethylene Extrudates, A. Tsuruta, T. Kanamoto, K. Tanaka, and R. Porter, *June, p. 521*

Failure of Rubber-Modified Plastic Liners, Y. W. Mai, *July, p. 560*

Mechanical Properties of Injection Molded Blends of Poly(Ethylene-Terephthalate) and Poly(Amide-6,6), M. R. Kamal, M. A. Sahto, and L. A. Utracki, *Mid-August, p. 637*

Characterization of Fast-Cure Resins for Reaction Injection Molding, J. S. Osinski, *September, p. 756*

The Preparation of Oriented Morphologies of the Thermotropic Aromatic Copolyester of Poly(ethylene Terephthalate) and 80 Mole Percent p-Acetoxybenzoic Acid, A. E. Zachariades and J. A. Logan, *October, p. 797*

Predicting Conversion in the Reaction Injection Molding Process. Using Temperature as the Measured Variable Part II: Implementation of the On-Line Corrective Algorithm, O. Del Pino, J. A. Romagnoli, and J. M. Castro, *November, p. 895*

Elastic Moduli of Highly Oriented Polyoxmethylene, C. L. Choy, W. P. Leung, and C. W. Huang, *November, p. 910*

252. *Tensile Properties*

Tensile Yield in Poly(4-Methyl Pentene-1), B. Hartman and R. F. Cole, Jr., *January, p. 13*

Notch Sensitivity and Fractography of Polyolefins, R. D. Goolsby and A. M. Chatterjee, *February, p. 117*

Effects of Strain Rate and Temperature upon Tensile Properties of Acetal Copolymers, K. F. Wissbrun, *March. p. 216*

Annealing of Ultra-Oriented High Density Polyethylene Extrudates, A. Tsuruta, T. Kanamoto, K. Tanaka, and R. Porter, *June, p. 521*

Characteristics of Polynorbornene and Ethylene-Propylene Terpolymer Blends, C. S. Wang, *June, p. 530*

The Hydrolytic Stability of Glass Fiber Reinforced Poly(butylene terephthalate), Poly(ethylene terephthalate) and Polycarbonate, P. G. Kelleher, R. P. Wentz, M. Y. Hellman, and E. H. Gilbert, *July, p. 537*

The Influence of Knit-Lines on the Tensile Properties of Injection Molded Parts, R. M. Criens and H. G. Mosle, *July, p. 591*

Mechanical Properties of Injection Molded Blends of Poly(Ethylene-Terephthalate) and Poly(Amide-6,6), M. R. Kamal, M. A. Sahto, and L. A. Utracki, *Mid-August, p. 637*

Review on Processing Ultra High Tenacity Fibers From Flexible Polymer, T. Ohta, *September, p. 697*

Properties of Phenolic Fiber-Reinforced Polymers, L. J. Broutman, *Mid-October, p. 776*

Solution Processing and Properties of Molecular Composite Fibers and Films, W-F. Hwang, D. R. Wiff, C. Verschoore, G. E. Price, T. E. Helminiak, and W. W. Adams, *Mid-October, p. 784*

Thermal, Mechanical, and Rheological Behavior of Blends of Ultrahigh and Normal-Molecular-Weight Linear Polyethylenes, S. K. Bhateja and E. H. Andrews, *November, p. 888*

253. *Thermal Properties*

Electron Transport Processes in Conductor-Filled Polymers, R. D. Sherman, L. M. Middleman, and S. M. Jacobs, *January, p. 36*

Thermal Conductivity of Plastic Foams, R. J. J. Williams and C. M. Aldao, *April, p. 293*

Physical Properties of High-Pressure Ethylene Vinylacetate Copolymers and Their Saponified Derivatives, R. J. Koopmans, R. Van Der Linden, and E. F. Vansant, *April, p. 306*

Properties of Polyisobutylene-Polyurethane Block Copolymers: I. Macroglycols from Ozonolysis of Isobutylene-Isoprene Copolymer, T. A. Speckhard, G. Ver Strate, P. E. Gibson, and S. L. Cooper, *April, p. 337*

Dynamic Mechanical and Thermomechanical Properties of Silicone-Polycarbonate Block Copolymers, W. Maung, K. M. Chua, T. H. Ng, and H. L. Williams, *Mid-June, p. 439*

Effect of the Addition of EPM Copolymers on the Properties of High Density Polyethylene/Isotactic Polypropylene Blends: II. Morphology and Mechanical Properties of Extruded Samples, L. D'Orazio, R. Greco, E. Martuscelli, and G. Ragosta, *June, p. 489*

Head to Head Polymers. XXV: Properties of Head to Head Polyisobutylene, M. Malanga and O. Vogl, *July, p. 597*

The Preparation of Oriented Morphologies of the Thermotropic Aromatic Copolyester of Poly(ethylene Terephthalate) and 80 Mole Percent p-Acet-

oxybenzoic Acid, A. E. Zachariades and J. A. Logan, *October, p. 797*

High Modulus/High Strength Polyethylene Obtained by High-Pressure Injection Molding, J. Kubat and J.-A. Manson, *November, p. 869*

Influence of Mold Design on the Mechanical Properties of High-Pressure Injection-Molded Polyethylene, J. Kubat, J.-A. Manson, and M. Rigdahl, *November, p. 877*

Thermal, Mechanical, and Rheological Behavior of Blends of Ultrahigh and Normal-Molecular-Weight Linear Polyethylenes, S. K. Bhateja and E. H. Andrews, *November, p. 888*

254. *Thermodynamic Properties*

Melt Flow of Polymer Blends, L. A. Utracki, *Mid-August, p. 602*

A Comparison of Miscible Binary Blend Interaction Parameters Measured by Different Methods, J. E. Harris, D. R. Paul, and J. W. Barlow, *August, p. 676*

Hydrogen Bonding Potential, HBP: A Model for Predicting Resin Solubilities in Organic Solvents, P. E. Rider, *October, p. 810*

255. *Thermosets*

A Model of Compression Mold Filling, C. L. Tucker, III, and F. Folgar, *Mid-February, p. 69*

Determination of Time Independent Component of the Complex Modulus During Cure of Thermosetting Systems, R. J. Farris and C. Lee, *July, p. 586*

256. *Time Dependence*

Effects of Shearing Conditions on Crystalline Orientation and Relaxation in Polyethylene, E. S. Hsiue, R. E. Robertson, and G. S. Y. Yeh, *Mid-February, p. 74*

Shear Modification of Polymers, A. Rudin and H. P. Schreiber, *Mid-June, p. 422*

Determination of Time Independence Component of the Complex Modulus During Cure of Thermosetting Systems, R. J. Farris and C. Lee, *July, p. 586*

Post-Curing of Dental Restorative Resin, W. Wu and B. M. Fanconi, *September, p. 704*

257. *Transfer Units*

The Length of a Transfer Unit (LTU) for Polymer Devolatilization Processes in Screw Extruders, G. P. Collins, C. D. Denson, and G. Astarita, *April, p. 323*

258. *Transition Temperature*

Characteristics of Polynorbornene and Ethylene-Propylene Terpolymer Blends, C. S. Wang, *June, p. 530*

259. *Transport*

Modeling of Transport of Small Molecules in Polymer Blends: Application of Effective Medium Theory, J. Sax and J. M. Ottino, *February, p. 165*

Diffusion of Ethyl Acetate Vapor in Strained Low Density Polyethylene, J. C. Phillips and A. Peterlin, *September, p. 734*

260. *Tubing*

Parameter Design Model for Corrugated Tubing, H. L. Krein, *Mid-April, p. 285*

261. *Tunneling*

Electron Transport Processes in Conductor-Filled Polymers, R. D. Sherman, L. M. Middleman, and S. M. Jacobs, *January, p. 36*

U

262. *Ultrasonic Welding*

Heating and Bonding Mechanisms in Ultrasonic Welding of Thermoplastics, M. N. Tolunay, P. R. Dawson, and K. K. Wang, *September, p. 726*

263. *Ultraviolet Irradiation*

Characterizing Photoresists by Thermal Analysis, B. K. Appelt, *February, p. 125*

Profile Modification of Resist Patterns in Optical Lithography, F. A. Vollenbroek, E. J. Spiertz and H. J. J. Kroon, *Mid-December, p. 925*

Ultrafast Deep UV Lithography Using Excimer Lasers, K. Jain, S. Rice, and B. J. Lin, *December, p. 1019*

Deep UV Photolithographic Systems and Processes, C. W. Wilkins, Jr., E. Reichmanis, E. A. Chandross and R. L. Hartless, *December, p. 1025*

A New Negative Working Resist for UV Light Lithography, H. Nakane, A. Yokota, S. Yamamoto and W. Kanai, *December, p. 1050*

264. *Ultraviolet Resists*

Recent Resist Developments in Japan—A Review, S. Nonogaki, *December, p. 985*

Design of a Positive Resist for Projection Lithography in the Mid-UV, G. Willson, R. Miller, D. McKean, N. Clecak, T. Tompkins, D. Hofer, J. Michl and J. Downing, *December, p. 1004*

Organosilicon Polymers for Lithographic Applications, J. M. Shaw, M. Hatzakis, J. Paraszczak, J. Liutkus, and E. Babich, *December, p. 1054*

V

265. *Velocity Profile*

The Flow of a Polymerizing Liquid in a Cylindrical Pipe, A. Y. Malkin, L. I. Sherysheva, S. G. Kulichikhin, and P. V. Zhirkov, *October, p. 804*

266. *Viscoelasticity*

Solvent-Crazing Criteria, D. C. Wright and K. V. Gotham, *February, p. 135*

Viscoelastic Behavior of Amorphous Polymers in the Glass-Rubber Transition Region: Birefringence Studies, B. E. Read, *October, p. 835*

Modeling Nonlinear Viscoelastic Response, Y. Partom and I. Schanin, *October, p. 849*

Effect of Morphology on Stress Relaxation of Polypropylene, G. Attalla, I. B. Guanella, and R. E. Cohen, *November, p. 883*

Rebound to Test Measure The Strength of Polymeric Materials, T. Casiraghi, *November, p. 902*

267. *Viscosity*

Newtonian Sintering Simulator of Two Spherical Particles, N. Rosenzweig and M. Narkis, *January, p. 32*

Melt Viscosity Behavior of Some Engineering Thermoplastics, R. A. Mendelson, *Mid-February, p. 79*

Flow Instabilities of Epoxide Prepolymers, J. V. Aleman, *March, p. 177*

Thermokinetic Modeling of an Epoxy Resin I. Chemoviscosity, Y. A. Tajima and D. Crozier, *March, p. 186*

Analytical Melting Model for Extrusion: Stress of Fully Compacted Solid Polymers, K. H. Chung and C. I. Chung, *March, p. 191*

Thermal Aging Study of Carboxyl-Terminated Polybutadiene and Poly(Butadiene-Acrylonitrile)-Reactive Liquid Polymers, Y. Okamoto, *March, p. 222*

Pressure Dependence of Newtonian Viscosity, L. A. Utracki, *Mid-June, p. 446*

Characterization of Fast-Cure Resins for Reaction Injection Molding, J. S. Osinski, *September, p. 756*

W

268. *Water Vapor Transport*

The Dual-Mode Solution and Transport of Water in Poly(acrylonitrile), G. R. Mauze and S. A. Stern *July, p. 548*

269. *Weld Lines*

Filling Thin Cavities of Variable Gap Thickness: A Numerical and Experimental Investigation, C. A. Hieber, L. S. Socha, S. F. Shen, K. K. Wang, and A. I. Isayer, *January, p. 20*

The Influence of Knit-Lines on the Tensile Properties of Injection Molded Parts, R. M. Criens and H. G. Mosle, *July, p. 591*

270. *Weld Strengths*

Heating and Bonding Mechanisms in Ultrasonic Welding of Thermoplastics, M. N. Tolunay, P. R. Dawson, and K. K. Wang, *September, p. 726*

271. *Whitening*

Studies on Whitening Phenomena Induced by Some Non-Solvents on Highly Oriented Glassy Polymers, N. H. Sung, R. E. Gahan, and R. E. Haven, *April, p. 328*

X

272. X-Ray Absorption Spectra

X-Ray Photochemistry: ω-Chloro Olefin Sulfones, M. Kaplan, *Mid-December, p. 957*

273. X-Ray Resists

X-Ray Photochemistry: ω-Chloro Olefin Sulfones, M. Kaplan, *Mid-December, p. 957*

Evaluation of the Influence of Process Factors on Plasma Developed X-Ray Resist Properties, G. N. Taylor, M. Y. Hellman, M. D. Feather and W. E. Willenbrock, *December, p. 1029*

Y

274. Yield Stress

Tensile Yield in Poly(4-Methyl Penetene-1), B. Hartman and R. F. Cole, Jr., *January, p. 13*

AUTHORS' INDEX

Numbers refer to category headings under "Subject and Title Index," i.e., 192 see Polynorbornene

A

Adams, W. W. 9, 11, 145, 252
Ait Kadi, A. 19, 219, 225, 251
Aldao, C. M. 26, 88, 127, 161, 253
Aleman, J. V. 74, 85, 151, 226, 267
Andrews, E. H. 15, 133, 183, 252, 253
Appelt, B. K. 47, 118, 172, 188, 263
Astarita, G. 55, 77, 86, 127, 257
Attalla, G. 48, 152, 196, 242, 266

B

Baba, S. M. 77, 128, 134, 224
Babich, E. 35, 47, 67, 153, 154, 188, 197, 218, 264
Baird, D. G. 37, 82, 122, 144, 152, 219, 222
Bajaj, P. 15, 16, 95, 130, 198, 246
Balaraman, K. S. 34, 39, 118, 128, 246
Baldyga, J. 57, 86, 128, 140, 209, 245
Barlow, J. W. 15, 113, 169, 182, 234, 254
Berube, G. M. 46, 71, 166, 233
Bevan, L. 43, 130, 191, 240
Bhateja, S. K. 15, 133, 183, 252, 253
Bigg, D. M. 4, 82, 131, 152, 183, 219
Blackwell, J. 3, 7, 16, 166, 200, 209
Bopp, R. C. 15, 60, 89, 108, 128, 152, 159
Bourne, J. R. 57, 86, 128, 140, 209, 245
Bowden, M. J. 40, 69, 188, 246
Brault, R. G. 116, 154, 198, 218
Broutman, L. J. 107, 168, 196, 211, 252
Brown, W. L. 52, 54, 84, 115, 125
Brueller, O. S. 43, 59, 127, 242
Buckley, A. 49, 135, 162, 184, 239
Burchell, D. J. 15, 63, 129, 166
Busigin, C. 9, 83, 130, 137, 196, 211
Bustamante, A. 43, 89, 130, 138, 152, 198

C

Cahill, R. W. 62, 82, 90, 106, 251
Cangelosi, F. 105, 146, 147, 150
Cangialose, C. 46, 71, 166, 233
Carreau, P. J. 19, 219, 225, 251
Casiraghi, T. 1, 65, 109, 173, 210, 266
Castro, J. M. 50, 128, 188, 206, 209, 251
Chandross, E. A. 172, 218, 263
Chatterjee, A. M. 48, 89, 149, 152, 157, 193, 252
Chella, R. 15, 57, 78, 120, 127, 173
Chen, B. T. 85, 100, 126, 233, 235
Choplin, L. 19, 219, 225, 251
Choy, C. L. 60, 65, 130, 194, 251
Chu, E. 49, 118, 127, 152, 183, 251
Chua, K. M. 16, 130, 141, 181, 242, 253
Chung, C. I. 78, 128, 134, 224, 225, 228, 239, 251, 267
Chung, K. H. 78, 128, 134, 239, 251, 267
Cid, F. 39, 149, 219, 246, 251
Clecak, N. 128, 172, 264
Cohen, R. E. 48, 152, 196, 242, 266
Cole, R. F. 43, 48, 193, 251, 252, 274
Coleman, M. M. 15, 105, 111, 180, 201
Collins, G. P. 55, 77, 86, 127, 257
Congdon, W. I. 1, 15, 64, 130, 182, 201, 219
Cooper, S. L. 16, 48, 130, 166, 187, 200, 253
Criens, R. M. 136, 181, 194, 198, 252, 269
Crivello, J. V. 33, 54, 160, 170, 172, 188
Crozier, D. 74, 118, 128, 188, 251, 267
Curry, J. 15, 77, 119, 127, 140

D

Dawson, P. R. 21, 99, 198, 262, 270
Dearborn, J. R. 70, 85, 151, 193, 220
Del Pino, O. 50, 128, 206, 209, 251
Denson, C. D. 55, 77, 86, 127, 257
De Vries, A. J. 12, 13, 48, 129, 196, 244
Djomo, H. 47, 108, 114, 191, 200, 243
Djordjevic, M. B. 15, 105, 147, 158, 195, 198
D'Orazio, L. 15, 130, 152, 193, 219, 253
Downing, J. 128, 172, 264
Duckett, R. A. 90, 107, 183, 223, 237

E

Economy, J. 107, 130, 152, 162
Egglestone, G. T. 27, 52, 118, 159, 196
Eise, K. 15, 77, 119, 127, 140
Elbirli, B. 77, 128, 134, 224
Erwin, L. 22, 78, 81, 85, 128, 140, 184, 211

F

Fanconi, B. M. 32, 50, 204, 256
Farid, S. 117, 171, 188
Farris, R. J. 50, 94, 127, 141, 255, 256
Feather, M. D. 216, 218, 273
Folgar, F. 50, 85, 100, 128, 144, 211, 255
Foux, A. 23, 66, 215, 230, 243, 244

G

Gahan, R. E. 48, 150, 162, 181, 191, 251, 271
Garcia-Rejon, A. 39, 149, 219, 246, 251
Garton, A. 111, 147, 169, 180, 233
George, G. A. 27, 52, 118, 159, 196
George, H. H. 49, 135, 162, 184, 239
Georgia, S. S. 40, 67, 150, 154, 189, 218
Gibson, P. E. 16, 48, 130, 166, 187, 200, 253
Gilbert, E. H. 106, 133, 181, 182, 211, 252
Gonzalez, H. 22, 128, 184
Goolsby, R. D. 48, 89, 149, 152, 157, 193, 252
Gotham, K. V. 43, 44, 242, 243, 266
Gottgetreu, S. R. 77, 128, 134, 224
Greco, R. 15, 130, 152, 193, 219, 253
Griffing, B. F. 14, 36, 128, 172
Guanella, I. B. 48, 152, 196, 242, 266
Gupta, D. C. 15, 16, 95, 130, 198, 246
Gutowski, T. G. 46, 71, 166, 233

H

Harris, J. E. 15, 113, 169, 182, 234, 254
Hartless, R. L. 172, 218, 263
Hartman, B. 43, 48, 193, 251, 252, 274
Hashimoto, M. 10, 154, 172, 203, 250
Haskell, W. E. 24, 42, 90, 130, 181, 211
Hattori, S. 67, 153, 188
Hatzakis, M. 35, 47, 67, 153, 154, 188, 197, 218, 246, 264
Haven, R. E. 48, 150, 162, 181, 191, 251, 271
Hellman, M. Y. 106, 133, 181, 182, 211, 216, 218, 252, 273
Helminiak, T. E. 9, 11, 145, 252
Hieber, C. A. 85, 128, 144, 196, 198, 269
Hijikata, I. 47, 105, 172, 190
Hoa, S. V. 202, 213, 240, 251
Hobbs, S. Y. 15, 62, 89, 108, 128, 152, 159
Hofer, D. 128, 172, 264
Holt, A. 49, 135, 162, 184, 239
Hopfenberg, H. B. 5, 54, 57, 128, 175, 198, 201, 251
Hsiue, E. S. 48, 162, 183, 225, 251, 256
Hsu, S. L. 7, 15, 48, 63, 105, 111, 129, 166, 182
Huang, C. W. 60, 65, 130, 194, 251
Huang, S. J. 38, 104, 149, 246
Huh, W. 31, 122, 161, 198, 219
Hwang, W-F. 9, 11, 145, 152, 166, 252

I

Ide, Y. 60, 85, 122, 130, 144, 152, 162, 219
Ieda, M. 67, 153, 188
Isayev, A. I. 13, 85, 128, 144, 162, 191, 196, 198, 241, 251, 269

Iskandar, M. 15, 111, 139, 147, 193, 201
Ito, H. 25, 40, 54, 67, 160, 172, 189
Iwatsu, T. 42, 74, 80, 89, 233
Iwayanagi, T. 10, 154, 172, 203, 250

J

Jacobs, S. M. 66, 128, 164, 215, 253, 261
Jain, K. 75, 121, 172, 263
Jasso, G. L. 15, 114, 132, 152, 183, 191
Jenekhe, S. A. 51, 64, 176, 186, 188, 219, 226, 235
Jensen, J. E. 116, 154, 198, 218
Johnson, J. F. 38, 104, 149, 246

K

Kaloni, P. N. 127, 219, 226, 249
Kalyon, D. 18, 48, 100, 128, 152, 183
Kamal, M. R. 15, 18, 48, 49, 100, 107, 118, 127, 128, 152, 159, 183, 184, 251, 252
Kanai, W. 47, 105, 172, 190, 218, 250, 263
Kanamoto, T. 7, 78, 152, 183, 251, 252
Kaplan, M. 29, 97, 170, 199, 272, 273
Kashiwagi, K. 47, 105, 172, 190
Kelleher, P. G. 106, 133, 181, 182, 211, 252
Khanna, S. K. 1, 15, 64, 130, 182, 201, 219
Kobayashi, Y. 73, 150, 155, 191, 212
Koibuchi, S. 10, 154, 172, 203, 250
Koopmans, R. J. 48, 53, 130, 133, 185, 253
Koros, W. J. 5, 54, 57, 128, 175, 198, 201, 251
Kost, J. 23, 66, 215, 230, 243, 244
Krein, H. L. 41, 70, 128, 236, 260
Kroon, H. J. J. 172, 217, 263
Kubat, J. 48, 92, 102, 130, 143, 253
Kubena, R. L. 116, 154, 198, 218
Kulichikhin, S. G. 85, 118, 127, 188, 265
Kulkarni, B. D. 34, 39, 118, 128, 246

L

Lahtinen, R. 9, 83, 130, 137, 196, 211
Laukhuf, W. L. S. 30, 74, 165, 232, 234, 247
Lee, C. 50, 94, 127, 141, 255, 256
Lee, W. 47, 50, 69, 150, 154, 188, 246
Leung, W. P. 60, 65, 130, 194, 251
Lewis, R. W. 24, 42, 90, 130, 181, 211
Li, N. 15, 63, 129, 166
Lifshitz, J. M. 53, 88, 130, 200
Lin, B. J. 75, 121, 172, 263
Lin, C. C. 49, 118, 149, 184, 251
Lindt, J. T. 77, 128, 134, 224
Liutkus, J. 35, 47, 67, 153, 154, 188, 197, 218, 246, 264
Logan, J. A. 122, 130, 152, 251, 253
Lu, F. J. 15, 63, 129, 166
Lyngaae-Jorgensen, J. 15, 83, 128, 148, 220

M

Mai, Y. W. 1, 79, 90, 130, 200, 251
Makino, D. 10, 154, 172, 203, 250
Malanga, M. 48, 52, 98, 149, 152, 187, 251, 253
Malkin, A. Y. 85, 118, 127, 188, 265
Mandell, J. F. 42, 48, 90, 152, 174, 183, 251
Manson, J.-A. 48, 92, 102, 130, 143, 183, 253
Manzione, L. T. 50, 74, 128, 140, 142, 144, 209
Marcantonio, K. J. 52, 54, 84, 115, 125
Mark, J. E. 11, 20, 127, 207
Martinez, G. M. 9, 83, 130, 137, 196, 211
Martuscelli, E. 15, 130, 152, 193, 219, 253
Mashelkar, R. A. 34, 39, 118, 128, 246
Matsubara, Y. 78, 85, 127, 143, 214
Maung, W. 16, 130, 141, 181, 242, 253
Mauze, G. R. 58, 127, 165, 175, 232, 268
Maxwell, B. 15, 114, 132, 152, 183, 191
McClelland, D. E. 78, 224, 225, 228, 251
McGarry, F. J. 42, 48, 90, 152, 174, 183, 251
McGrath, J. E. 15, 111, 139, 147, 193, 201
McKean, D. 128, 172, 264
Mendelson, R. A. 72, 149, 219, 228, 251, 267
Meyer, G. C. 47, 108, 114, 191, 200, 243
Meyerhofer, D. 56, 124, 128, 172, 208
Michl, J. 128, 172, 264
Middleman, L. M. 66, 128, 164, 215, 253, 261
Miller, D. C. 40, 67, 189
Miller, R. 128, 172, 264
Millman, G. M. 5, 44, 53, 73, 198
Mitchell, J. 56, 124, 128, 172, 208
Mizutani, K. 42, 74, 80, 89, 233
Mokhtarian, F. 78, 85, 128, 140
Molis, S. E. 7, 48, 105, 111, 182
Morawetz, H. 15, 87, 114, 166
Morin, A. 47, 108, 114, 191, 200, 243
Morita, S. 67, 153, 188
Moskala, E. J. 15, 105, 111, 180, 201
Mosle, H. G. 136, 181, 194, 198, 252, 269
Murray, C. A. 52, 54, 84, 115, 125

N

Nadgir, V. M. 30, 74, 165, 232, 234, 247
Nakane, H. 47, 105, 172, 190, 218, 250, 263
Nangeroni, J. F. 15, 77, 119, 127, 140
Narkis, M. 23, 66, 85, 128, 215, 230, 231, 243, 244, 248, 267
Ng, T. H. 16, 130, 141, 181, 242, 253
Nicolais, L. 31, 122, 161, 198, 219
Nimmer, R. P. 109, 127, 130, 181, 243
Nonogaki, S. 10, 67, 154, 172, 190, 203, 250, 254, 264
Novembre, A. E. 40, 69, 188, 246
Nugent, H. 43, 130, 191, 240
Nunes, R. W. 38, 104, 149, 246

O

Ohta, T. 60, 93, 96, 103, 150, 252
Oikawa, S. 47, 105, 172, 190
Okamoto, Y. 5, 177, 178, 251, 267
Okine, R. K. 44, 181, 198, 238, 242, 251
Olguin, A. 15, 139, 193, 198, 219, 221, 227, 248
Ong, E. 153, 172, 216, 218
Ophir, Z. 60, 85, 122, 130, 144, 162, 219
Osborne, J. L. 5, 54, 57, 128, 175, 198, 201, 251
Osinski, J. S. 50, 74, 118, 127, 128, 140, 142, 144, 200, 209, 251, 267
Ottino, J. M. 15, 57, 78, 120, 127, 128, 152, 165, 173, 259
Ouellette, P. 202, 213, 240, 251

P

Painter, P. C. 15, 105, 111, 180, 201
Paraszczak, J. 35, 47, 67, 153, 154, 188, 197, 218, 246, 264
Paredes, E. 43, 89, 130, 138, 152, 198
Partom, Y. 85, 128, 156, 167, 266
Paul, D. R. 15, 113, 169, 182, 234, 254
Pederson, L. 75, 121, 172, 263
Peterlin, A. 58, 165, 183, 234, 238, 259
Petrie, S. P. 24, 42, 90, 130, 181, 211
Phillips, J. C. 58, 165, 183, 234, 238, 259
Pilati, F. 15, 16, 39, 47, 182, 184
Plank, C. A. 30, 74, 165, 232, 234, 247
Plochocki, A. P. 15, 132, 140, 152, 220
Pollock, M. A. 22, 128, 184
Porter, R. S. 7, 15, 78, 105, 147, 152, 158, 183, 195, 198, 251, 252
Price, G. E. 9, 11, 145, 252

Q and R

Quay, J. 3, 7, 16, 166, 200, 209
Ragosta, G. 15, 130, 152, 193, 219, 253
Ranade, G. R. 30, 74, 165, 232, 234, 247
Rangel-Nafaile, C. 39, 149, 219, 246, 251
Read, B. E. 6, 13, 127, 212, 266
Reichmanis, E. 153, 172, 216, 218, 263
Rice, S. 75, 121, 172, 263
Riddell, S. Z. 27, 52, 118, 159, 196
Rider, P. E. 73, 105, 128, 232, 254
Rigdahl, M. 92, 102, 130, 143, 183, 253
Rios, L. 39, 149, 219, 246, 251
Rivas, L. 43, 89, 130, 138, 152, 198
Roberts, D. R. 42, 48, 90, 152, 174, 183, 251
Roberts, E. D. 47, 52, 61, 67, 246
Robertson, R. E. 48, 162, 183, 225, 251, 256
Robeson, L. M. 15, 111, 139, 147, 193, 201
Roche, E. J. 5, 28, 123, 130, 201
Roe, R. J. 5, 44, 53, 73, 198
Romagnoli, J. A. 50, 128, 188, 206, 209, 251
Rosenzweig, N. 85, 128, 231, 248, 267
Rudin, A. 149, 183, 220, 225, 256

S

Sahto, M. A. 15, 107, 159, 184, 251, 252
Samuels, R. J. 48, 110, 161, 162, 196
Sanschagrin, B. 112, 127, 198, 206, 246
Sarti, G. C. 5, 54, 57, 128, 175, 198, 201, 251
Sax, J. 15, 57, 128, 152, 165, 259
Schanin, I. 85, 128, 156, 167, 266
Schreiber, H. P. 15, 139, 149, 183, 193, 198, 219, 220, 221, 225, 227, 248, 256
Sebastian, D. H. 70, 85, 151, 193, 220
Shaw, J. M. 35, 40, 67, 153, 154, 188, 197, 218, 246, 264
Shaw, M. T. 105, 146, 147, 150
Shen, D. Y. 7, 48, 105, 111, 182
Shen, S. F. 85, 128, 144, 196, 198, 269
Sherman, R. D. 66, 128, 164, 215, 253, 261
Sherysheva, L. I. 85, 118, 127, 188, 265
Shu, J. 47, 50, 69, 150, 154, 188, 246
Socha, L. S. 85, 128, 144, 196, 198, 269
Specht, D. P. 117, 171, 188
Speckhard, T. A. 16, 48, 130, 166, 187, 200, 253
Sperling, L. H. 16, 47, 68, 114, 129, 152, 179, 198, 242, 250
Spiertz, E. J. 172, 217, 263
Spruiell, J. E. 13, 48, 162, 241
Squires, P. H. 76, 77, 101, 224
Stastna, V. 127, 219, 226, 249
Stern, S. A. 58, 127, 165, 175, 268
Suh, N. P. 44, 46, 71, 166, 181, 198, 233, 238, 242, 251
Sung, N. H. 48, 150, 162, 181, 191, 251, 271

T

Tajima, Y. A. 74, 118, 128, 188, 251, 267
Tamano, J. 67, 153, 188

Tan, Z. C. H. 40, 67, 150, 154, 189, 218
Tanaka, K. 7, 78, 152, 183, 251, 252
Taylor, G. N. 216, 218, 273
Tessier, T. G. 40, 67, 189
Throne, J. L. 17, 45, 91, 251
Tolunay, M. N. 21, 99, 198, 262, 270
Tompkins, T. 128, 172, 264
Tran, C. 15, 111, 139, 147, 193, 201
Truss, R. W. 90, 107, 183, 223, 237
Tsuda, M. 47, 105, 172, 190
Tsuruta, A. 7, 78, 152, 183, 251, 252
Tucker, C. L. 50, 85, 100, 128, 144, 211, 255
Tukachinski, L. I. 8, 65, 127, 221, 229, 243
Turner, R. B. 3, 7, 16, 166, 200, 209

U

Utracki, L. A. 15, 16, 107, 127, 133, 149, 152, 159, 184, 205, 219, 251, 252, 254, 267

V

Van der Linden, R. 48, 53, 130, 133, 185, 253
Vansant, E. F. 48, 53, 130, 133, 185, 253
Varnell, D. F. 15, 105, 111, 180, 201
Varnell, G. 47, 50, 69, 150, 154, 188, 246
Varshney, S. K. 15, 16, 95, 130, 198, 246
Venable, L. 47, 50, 69, 150, 154, 188, 246
Venkatesan, T. 52, 54, 84, 115, 125
Verschoore, C. 9, 11, 145, 152, 166, 252
Ver Strate, G. 16, 48, 130, 166, 187, 200, 253
Vogl, O. 48, 52, 98, 149, 152, 187, 251, 253
Vollenbroek, F. A. 172, 217, 263
Von Turkovich, R. 78, 81, 211

W

Wang, C. S. 15, 50, 163, 192, 193, 252, 258
Wang, K. K. 21, 85, 99, 128, 144, 196, 198, 262, 269, 270
Ward, I. M. 90, 107, 183, 223, 237
Watkins, V. H. 15, 62, 89, 108, 128, 152, 159
Weiss, R. A. 31, 122, 161, 198, 219
Welsh, W. J. 11, 20, 127, 207
Wentz, R. P. 106, 133, 181, 182, 211, 252
West, P. R. 14, 36, 128, 172
White, J. L. 13, 48, 52, 78, 135, 151, 162, 196, 219, 241, 250
Widmaier, J. M. 114, 129, 152, 179, 198
Wiff, D. R. 9, 11, 145, 152, 166, 252
Wilkens, B. J. 52, 54, 84, 115, 125
Wilkes, G. L. 37, 82, 122, 144, 152, 219, 222
Wilkins, C. W. 153, 172, 216, 218, 263
Willenbrock, W. E. 216, 218, 273
Williams, H. L. 16, 130, 141, 181, 242, 253
Williams, J. L. R. 117, 171, 188
Williams, R. J. J. 26, 88, 127, 161, 253
Willson, C. G. 25, 40, 54, 67, 75, 121, 160, 172, 189, 263, 264
Wissbrun, K. F. 2, 127, 149, 251, 252
Woodhams, R. T. 9, 83, 130, 137, 196, 211
Wright, D. C. 43, 44, 242, 243, 266
Wu, W. 32, 50, 204, 256

X

Xi, F. 52, 98, 149, 187, 251

Y

Yabuta, M. 47, 105, 172, 190
Yamada, M. 67, 153, 188
Yamamoto, S. 172, 190, 218, 250, 263
Yamane, H. 52, 78, 135, 151, 196, 219, 250
Yeh, G. S. Y. 48, 162, 183, 225, 251, 256
Yokota, A. 47, 105, 172, 190, 218, 250, 263
Yoshida, H. 73, 150, 155, 191, 212

Z

Zachariades, A. E. 107, 122, 130, 152, 162, 251, 253
Zhirkov, P. V. 85, 118, 127, 188, 265
Zurawski, D. E. 16, 47, 68, 242, 250